AI 15617

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES & ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRNOMENTAL PROTECTION
DIVISION OF WATER

APPLICATION FOR PERMIT TO CONSTRUCT ACROSS OR ALONG A STREAM AND / OR WATER QUALITY CERTIFICATION

Chapter 151 of the Kentucky Revised Statutes requires approval from the Division of Water prior to any construction or other activity in or along a stream that could in any way obstruct flood flows or adversely impact water quality. *If the project involves work in a stream, such as bank stabilization, dredging or relocation, you will also need to obtain a 401 Water Quality Certification (WQC) from the Division of Water.* This completed form will be forwarded to the Water Quality Branch for WQC processing. The project may not start until all necessary approvals are received from the KDOW. For questions concerning the WQC process, contact the WQC section at 502/564-3410.

If the project will disturb more than 1 acre of soil, you will also need to complete the attached Notice of Intent for Storm Water Discharges, and return both forms to the Floodplain management Section of the KDOW. This general permit will require you to create an implement an erosion control plan for the project.

1. **OWNER:** Opus North Corporation/Mr. Michael McBrayer 19275A
   Give name of person(s), company, governmental unit, or other owner of proposed project.
   MAILING ADDRESS: 600 North Cleveland Avenue, Suite 190, Westerville, OH 43082
   TELEPHONE #: (614)508-3612 **EMAIL:** Mike.McBrayer@opusnorth.com

2. **AGENT:** Civil & Environmental Consultants, Inc./Daniel J. Godec
   Give name of person(s) submitting application, if other than owner.
   ADDRESS: 4274 Glendale-Milford Road, Cincinnati, OH 45242
   TELEPHONE #: (513) 985-0226 **EMAIL:** dgodec@cecinc.com

3. **ENGINEER:** Jim Zentmeyer **P.E. NUMBER:** 18953
   Contact Division of Water if waiver can be granted.
   TELEPHONE #: (513) 985-0226 **EMAIL:** jzentmeyer@cecinc.com

4. **DESCRIPTION OF CONSTRUCTION:** The proposed project involves the design and construction of a class "A" speculative industrial building (proposed Hebron Industrial Park) within an approximate 39-acre undeveloped parcel of land. The project will require the placement of clean fill material in ephemeral and intermittent tributaries to Woolper Creek, two wetlands, and one open water feature. For additional information please see the attached cover letter.

5. **COUNTY:** Boone **NEAREST COMMUNITY:** Hebron, Kentucky

6. **USGS QUAD NAME:** Burlington **LATITUDE/LONGITUDE:** 39°4'34.4"N; 84°43'22.3"W at the southern most portion of the Site

7. **STREAM NAME:** Unnamed intermittent and ephemeral tributaries to Woolper Creek
   WATERSHED SIZE (in acres): Approximately 79.6 acres

8. **LINEAR FEET OF STREAM IMPACTED:** Approximately 2,939 linear feet

9. **DIRECTIONS TO SITE:** From Interstate 275 West, take Exit #8B, going south on North Bend Road. From North Bend Road, turn right onto Litton Lane. Follow Litton Lane until it dead ends. The eastern boundary of the Site is located approximately 570 feet east of the end of Litton Lane.

10. **IS ANY PORTION OF THE REQUESTED PROJECT NOW COMPLETE?** Yes X No If yes, identify the completed portion on the drawings you submit and indicate the date activity was completed. DATE: _____

11. **ESTIMATED BEGIN CONSTRUCTION DATE:** Fall 2009

12. **ESTIMATED END CONSTRUCTION DATE:** Fall 2010

13. **HAS A PERMIT BEEN RECEIVED FROM THE US ARMY, CORPS of ENGINEERS?** ☒ Yes ☐ No If yes, attach a copy of that permit. An Individual Clean Water Act Section 404 Permit was previously obtained from the U.S. Army Corps of Engineers when the Site was under previous ownership. This permit was issued on September 10, 2002 (Permit Number 200101347). A general condition of the permit was completion of construction by June 30, 2005. Due to a change in development plans and work being postponed, a new Individual 404 Permit is required from the USACE. The Individual Clean Water Act Section 404 Permit has been submitted concurrently with the Individual 401 WQC.

14. **THE APPLICANT *MUST* ADDRESS PUBLIC NOTICE:**

(a) PUBLIC NOTICE HAS BEEN GIVEN FOR THIS PROPOSAL BY THE FOLLOWING MEANS:

_X_ **Public notice in newspaper having greatest circulation in area (provide newspaper clipping or affidavit)**

____ **Adjacent property owner(s) affidavits** (Contact Division of Water for requirements.)

(b) ____ I REQUEST WAIVER OF PUBLIC NOTICE BECAUSE:

_____

Contact Division of Water for requirements.

15. **I HAVE CONTACTED THE FOLLOWING CITY OR COUNTY OFFICIALS CONCERNING THIS PROJECT:**

Mr. Jim Key of the Boone County Building Department was contacted to determine if local permits would be required for construction activities associated with the proposed project. Mr. Smith stated that local building permits would be required for the project when construction begins in addition to planning and zoning approval prior to development.

Give name and title of person(s) contacted and provide copy of any approval city or county may have issued.

16. **LIST OF ATTACHMENTS:** Please see attached cover letter.

List plans, profiles, or other drawings and data submitted. Attach a copy of a 7.5 minute USGS topographic map clearly showing the project location.

17. **I, Michael McBrayer (owner) CERTIFY THAT THE OWNER OWNS OR HAS EASEMENT RIGHTS ON ALL PROPERTY ON WHICH THIS PROJECT WILL BE LOCATED OR ON WHICH RELATED CONSTRUCTION WILL OCCUR (for dams, this includes the area that would be impounded during the design flood).**

18. **REMARKS:** For additional information regarding the proposed project, please see the attached cover letter and attachments.

I hereby request approval for construction across or along a stream as described in this application and any accompanying documents. To the best of my knowledge, all the information provided is true and correct.

SIGNATURE: _____

Owner or Agent sign here. (If signed by Agent, a Power of Attorney should be attached.)

DATE: 3-16-09

SIGNATURE OF LOCAL FLOODPLAIN COORDINATOR:

_____

Permit application will be returned to applicant if not properly endorsed by the local floodplain coordinator.

DATE: _____

SUBMIT APPLICATION AND ATTACHMENTS TO:

Floodplain Management Section
Division of Water
14 Reilly Road
Frankfort, KY 40601

Civil & Environmental Consultants, Inc.
4274 Glendale Milford Road
Cincinnati, Ohio 45242
Phone: (513) 985-0226 FAX: (513) 985-0228

LETTER OF TRANSMITTAL

TO:	**Floodplain Management Section Kentucky Division of Water**	**DATE:**	**March 19, 2009**
FROM:	**Maggie Vuturo Bosiljevac**	**CC:**	
PROJECT:	**Hebron Industrial Park**	**PROJECT No.:**	**070-508.0006**
LOCATION:	**Hebron, Boone Co., Kentucky**		
SUBJECT:	**Application for Permit to Construct Across or Along a Stream/Individual Clean Water Act Section 401 Water Quality Certification**		

DELIVERY: **Courier:** ☐ Priority ☒ Standard ☐ Two Day Electronic Mail: ☐

Dear Sir/Madam:

We are sending you the following. If enclosures are not as noted, kindly notify us at once.

COPIES	DESCRIPTION
2	401 Application/Letter
1	Public Notice Affidavit
1	$2,500 Check for Permit Fee

THESE ARE TRANSMITTED as checked below:

For Approval	☐	Approved as submitted	☐	Resubmit	copies for distribution
For Your Use	☒	Approved as noted	☐	Submit	copies for distribution
As Requested	☐	Returned for corrections	☐	Return	corrected prints

REMARKS: **Attached please find two copies of an Application for Permit to Construct Across or Along a Stream/Individual Clean Water Act Section 401 Water Quality Certification for the proposed Hebron Industrial Park located in Hebron, Boone County, Kentucky. Also attached is a copy of the Affidavit of Publication and a $2,500 check for the permit fee. Please contact me at (513) 985-0226 or via email at mbosiljevac@cecinc.com with any questions regarding the the permit application.**

COPY: FILE

SIGNED: Maggie Vuturo Bosiljevac

Maggie Vuturo Bosiljevac
Assistant Project Manager

RECEIVED

MAR 05 2009

Affidavit of Publication

Publisher's Fee $368.00 Affidavit Charge $10.00

State of Ohio }
}
} SS.
}
Hamilton County }

RECEIVED
MAR 24 2009
By_____

Personally appeared _____ Crystal Williams

Of The Enquirer, a newspaper printed in Cincinnati, Ohio and published in Cincinnati, said County and State, and of general circulation in said county, who being duly sworn deposeth and saith that the advertisement of which the annexed is a true copy, has been published in said newspaper 3 times, once in each issue as follows.

2/23/09	2/24/09	2/25/09			

PUBLIC NOTICE
Notice is hereby given that Opus North Corporation (600 North Cleveland Avenue, Suite 190, Westerville, Ohio, 43082), will file an application with the Natural Resources and Environmental Protection Cabinet for the industrial development of an approximate 39-acre property located in Hebron, Boone County, Kentucky. The project requires the fill of portions of ten ephemeral and intermittent tributaries to Woolper Creek, two wetlands, and one open water area. The Site is located south of Interstate 275, north of Petersburg Road, and west of Litton Lane. The project is scheduled to commence in fall 2009. Comments or objections concerning this application shall be directed to: Kentucky Division of Water, Water Resources Branch, 14 Reilly Road, Frankfort Office Park, Frankfort, Kentucky 40601. Phone: (502) 564-3410. 1001443688

X Cincinnati Enquirer

Kentucky Enquirer

X Cincinnati.Com

Crystal Williams
AFFIANT

Sworn to before me this

2/27/09

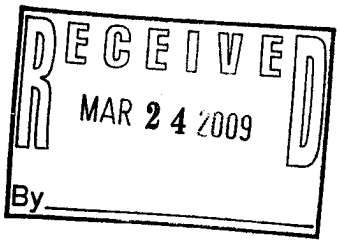
Doris Thomas
Notary Public of Ohio

NOTARIAL SEAL STATE OF OHIO

Doris Thomas
Notary Public, State of Ohio
My Commission Expires 02-21-2012

February 19, 2009

Floodplain Management Section
Kentucky Division of Water
14 Reilly Road
Frankfort, KY 40601



To Whom It May Concern:

Subject: Application for Permit to Construct Across or Along a Stream and Individual Clean Water Act Section 401 Water Quality Certification
Proposed Hebron Industrial Park
Opus North Corporation
Hebron, Boone County, Kentucky
CEC Project No. 070-508.0006

On behalf of Opus North Corporation (Opus), Civil & Environmental Consultants, Inc. (CEC) hereby requests Individual Clean Water Act Section 401 Water Quality Certification (WQC) and Permit to Construct Across or Along a Stream authorization for the placement of fill within ephemeral streams, intermittent streams, open water areas, and wetlands within the proposed Hebron Industrial Park (the Site). Because impacts to waterbodies exceed allowable impacts under Nationwide Permit (NWP) 39 – Commercial and Institutional Developments, an Individual Section 404 Water Quality Certification will be obtained from the U.S. Army Corps of Engineers (USACE) – Louisville District. Waterbody impacts also exceed the limits set forth by the Kentucky Division of Water (KDOW) General Certification for NWP 39, therefore an Individual Section 401 WQC/Application for Permit to Construct Across or Along a Stream from KDOW is required for the Site. The permit application is included as Attachment A. A jurisdictional waters delineation of the Site was conducted by CEC on March 4, 2008, March 17, 2008, and April 2, 2008. A copy of the jurisdictional waters delineation report is included as Attachment B.

Additional permits/clearances required prior to the start of construction include Endangered Species Act clearance from the United State Fish and Wildlife Service (USFWS) Frankfort Ecological Services Field Office and Section 106 of the National Historic Preservation Act clearance from the Kentucky Heritage Council State Historic Preservation Office (SHPO). These clearances were requested in writing on January 14, 2009. Clearance has been received from the USFWS via their response letter dated February 3, 2009; a copy of this letter is included in Appendix C. Upon receipt of the remaining clearances, CEC will send applicable copies of the correspondence to your office.

The Site consists of approximately 39 acres of land located south of Interstate 275 (I-275), north of Petersburg Road, and west of Litton Lane, in Hebron, Boone County, Kentucky. The latitude and longitude coordinates for the southern most portion of the Site are 39°4'34.4"N and 84°43'22.3"W, respectively. The location of the Site is indicated on the attached site location map (Figure 1).

According to the U.S. Geological Survey (USGS) 7.5-minute Burlington, Kentucky quadrangle topographic map (Figure 1), the Site primarily consists of rolling hills. Elevations on the Site range from approximately 835 to 895 feet above mean sea level. Surface water drainage from the Site generally flows east to west toward an unnamed tributary of Woolper Creek which originates within the Site.

Public notice is a requirement for both the Application for Permit to Construct Across or Along a Stream and Section 401 Water Quality Certification. Public notice for the Site has been submitted for publication to The Cincinnati Enquirer by CEC. A copy of the proof of publication will be sent to the KDOW upon receipt.

1.0 STREAM IMPACTS

A jurisdictional waters delineation reconnaissance of the Site identified ten streams within and adjacent to the Site: two interpreted jurisdictional unnamed ephemeral/intermittent tributaries to

Woolper Creek (Streams 3 and 5), six interpreted jurisdictional ephemeral streams that drain within the Site to Stream 3 (Streams 1, 2, 2b, 4, 8, 9) and two interpreted jurisdictional ephemeral streams that drain to Stream 5 outside of the Site boundary (Streams 6 and 7). Upstream portions of Streams 3 and 5 within the Site have been identified as ephemeral. Table 1 outlines the streams located within the Site and the stream impacts that are proposed for development of the Site. Locations of the streams are shown on the attached jurisdictional waters delineation map (Figure 2). For additional information regarding these streams, please see the attached jurisdictional waters delineation report (Attachment B). Photographs of the streams are included in the jurisdictional waters delineation report, with the location and orientation of the photographs indicated on the photograph location map (Figure 5) in the jurisdictional waters delineation report.

TABLE 1
STREAM INFORMATION
Proposed Hebron Industrial Park
Boone County, Kentucky

Stream Segment Identifier	Approximate On-site Length (linear feet)		Approximate Proposed Impact (linear feet)	
	Ephemeral	Intermittent	Ephemeral	Intermittent
Stream 1	238	NA	238	NA
Stream 2	643	NA	643	NA
Stream 2B	134	NA	134	NA
Stream 3	591	592	591	592
Stream 4	85	NA	85	NA
Stream 5	401	372	401	106
Stream 6	118	NA	0	NA
Stream 7	101	NA	0	NA
Stream 8	63	NA	63	NA
Stream 9	86	NA	86	NA
SUBTOTAL	**2,460**	**964**	**2,241**	**698**
TOTAL	**3,424**		**2,939**	

Notes: NA = Not Applicable

2.0 WETLAND IMPACTS

The jurisdictional waters delineation of the Site identified one forested wetland (Wetland 1) and one emergent wetland (Wetland 2) within the Site. Wetland 1 is located within the floodplain of Stream 3. Wetland 2 is located between Pond 1 and Interstate 275. Table 2 outlines the wetland acreage within the Site and the proposed wetland impacts that will occur within the Site. Locations of the wetlands are shown on the attached jurisdictional waters delineation map (Figure 2). For additional information regarding these wetlands, please see the attached jurisdictional waters delineation report (Attachment B). Photographs of the wetlands are included in the jurisdictional waters delineation report, with the location and orientation of the photographs indicated on the photograph location map (Figure 5) in the jurisdictional waters delineation report.

TABLE 2
WETLAND IMPACTS
Proposed Hebron Industrial Park
Boone County, Kentucky

Wetland Identifier	Wetland Classification	Approximate Acreage Within Site (Acres)	Approximate Proposed Impact (Acres)
Wetland 1	Forested	0.09	0.09
Wetland 2	Emergent	0.13	0.13
Total	--	**0.22**	**0.22**

3.0 OPEN WATER IMPACTS

The jurisdictional waters delineation study conducted within the Site identified one open water feature (Pond 1). Pond 1 is adjacent to Wetland 2 within the northern portion of the Site. Water flows east from Wetland 2 to Pond 1, then to Stream 5. Table 3 outlines the open water area acreage within the Site and the proposed impacts that will occur within the Site. The location of the open water area is shown on the attached jurisdictional waters delineation map (Figure 2). For additional information regarding the open water area, please see the attached jurisdictional

waters delineation report (Attachment B). Photographs of the open water area are included in the jurisdictional waters delineation report, with the location and orientation of the photographs indicated on the photograph location map (Figure 5) in the jurisdictional waters delineation report.

TABLE 3
OPEN WATER AREA IMPACTS
Proposed Hebron Industrial Park
Boone County, Kentucky

Open Water Area Identifier	Approximate Acreage Within Site (Acres)	Approximate Proposed Impact (Acres)
Pond 1	0.27	0.27
Total	**0.27**	**0.27**

4.0 PROPOSED MITIGATION

Representatives of CEC and Opus met with Mr. Todd Hagman of the Louisville District of the USACE for a pre-application meeting on April 22, 2008, to discuss mitigation requirements for the Site. Opus proposes to mitigate jurisdictional waterbody impacts using a combination of on-site storm water controls and fees in lieu of mitigation. Ephemeral stream impacts will be mitigated through the installation of pavement catch basins, perimeter drainage controls, and storm water controls at the Site. This will include the construction of down spout drains that will drain to a detention basin located in the northwestern portion of the Site. These features are shown on the attached Preliminary Grading Plan (Attachment D).

Opus proposes to mitigate intermittent stream impacts and wetland impacts off-site, through in-lieu-fees. The proposed in-lieu-fees would be payable to the Stream and Wetland Restoration Fund (Stream Fund) administered by the USACE and the KDOW and managed by the Northern Kentucky University (NKU) Center for Applied Ecology.

5.0 CONCLUSION

On behalf of Opus, CEC requests authorization for this Application for Permit to Construct Across or Along a Stream and Individual Clean Water Act Section 401 WQC for the placement of clean fill material in waterbodies associated with the development of the proposed Hebron Industrial Park. Individual Clean Water Act Section 401 WQC/Application for Permit to Construct Across or Along a Stream from KDOW is required for the Site based on exceeding the limits of waterbody impacts set forth under the KDOW General Certification of NWP 39.

We appreciate your review of this permit application and thank you for your time and consideration. Please do not hesitate to contact us at (513) 985-0226 if you have questions or need any additional information.

Respectfully submitted,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

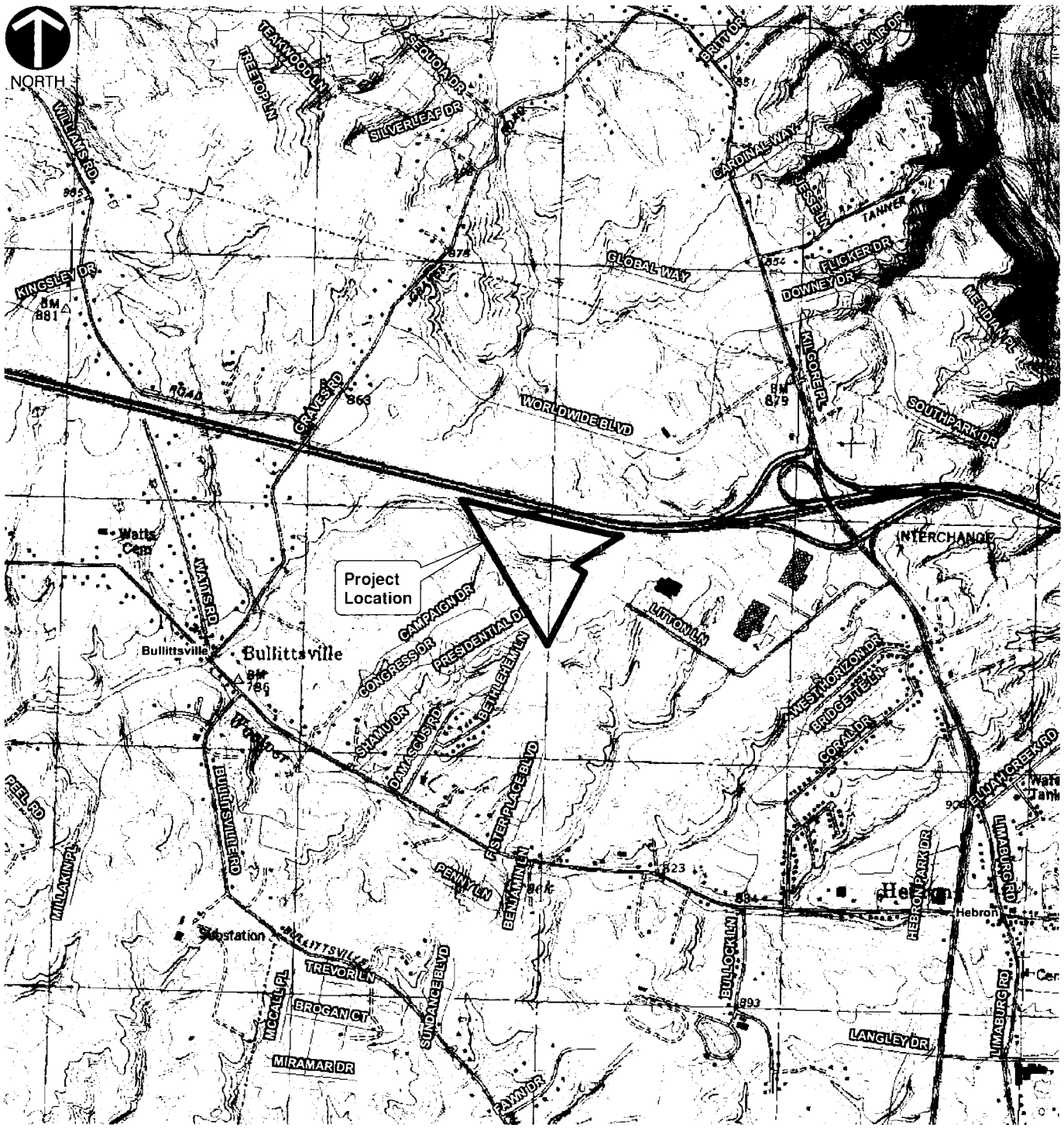
Daniel J. Godec
Project Manager

James E. Zentmeyer, P. E.
Principal

Attachments: Figure 1 – Site Location Map
Figure 2 – Jurisdictional Waters Delineation Map
Attachment A – Application for Permit to Construct Across or Along a Stream and Individual 401 Water Quality Certification
Attachment B – Jurisdictional Waters Delineation Report
Attachment C – Agency Clearance Documentation
Attachment D – Preliminary Grading Plan

cc: Mr. Michael McBrayer, Opus North Corporation
Mr. Jon Blaha, Opus Corporation

FIGURES



SOURCE: USGS 7.5-MINUTE TOPOGRAPHIC QUADRANGLE MAP - BURLINGTON, KENTUCKY, 1984.

Civil & Environmental Consultants, Inc.
Cincinnati, OH
(513) 985-0226 (800) 759-5614
Pittsburgh, PA Chicago, IL Cleveland, OH Columbus, OH Detroit, MI
Export, PA Indianapolis, IN Nashville, TN St. Louis, MO

Site Location Map

OPUS NORTH CORPORATION

Hebron Industrial Park -
Heiman/McGlasson Property
Hebron, Boone County, Kentucky

DWN. BY: MJB	SCALE:	DATE:	PROJECT NO:	FIGURE NO:
CHKD. BY: MAVB	1 " equals 2,000 feet	05/14/2008	070-508	1

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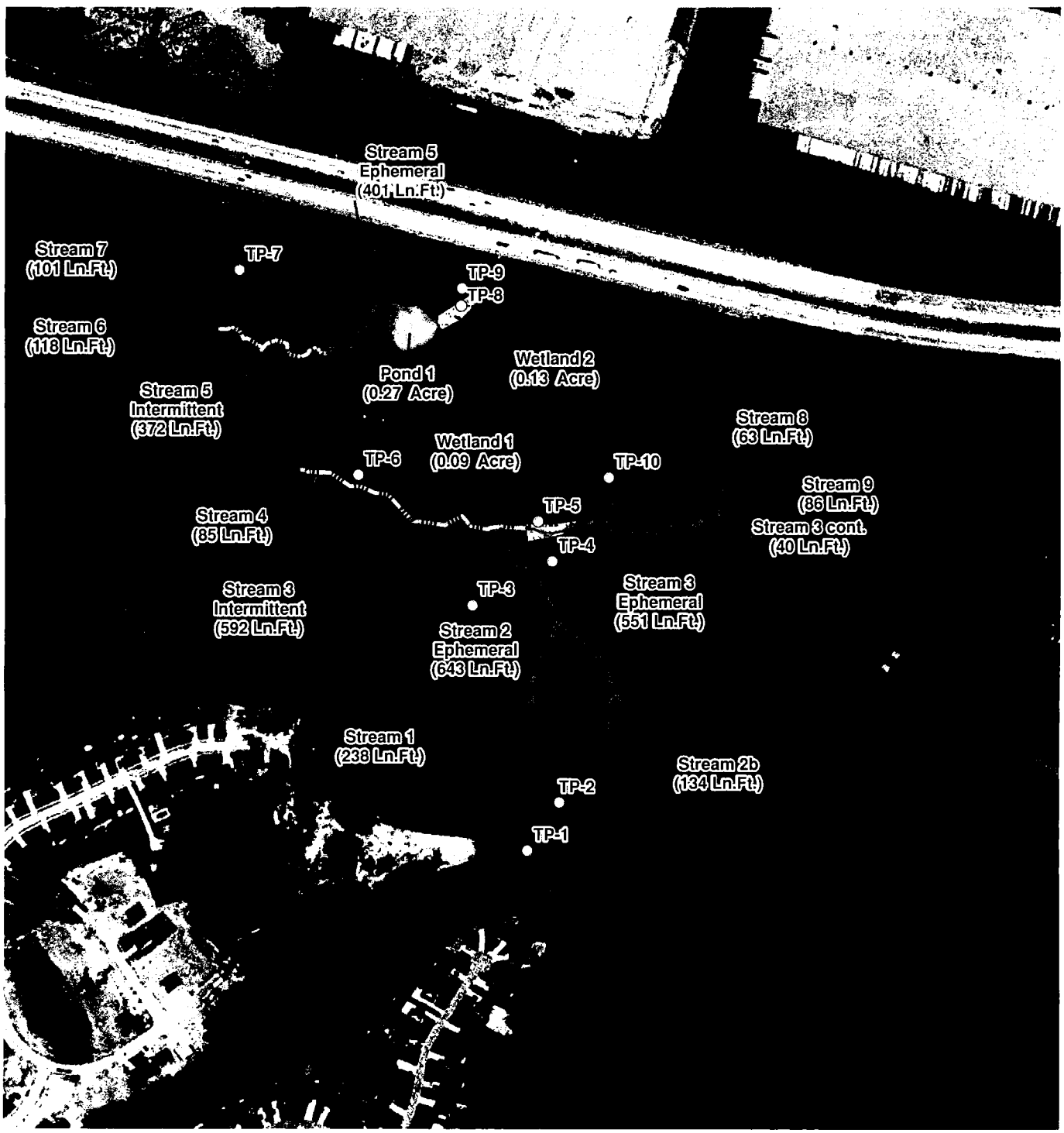

SOURCE: PORTION OF AN ESRI IMAGE MAP SERVICE - http://services.arcgisonline.com/v92, SERVICE NAME - I3_Imagery_Prime_World_2D

Civil & Environmental Consultants, Inc.
Cincinnati, OH
(513) 985-0226 (800) 759-5614
Pittsburgh, PA Chicago, IL Cleveland, OH Columbus, OH Detroit, MI
Export, PA Indianapolis, IN Nashville, TN St. Louis, MO

Jurisdictional Waters Delineation Map
OPUS NORTH CORPORATION
Hebron Industrial Park - Heiman/McGlasson Property
Hebron, Boone County, Kentucky

DWN. BY: MJB	SCALE:	DATE:	PROJECT NO:	FIGURE NO:
CHKD. BY: MAVB	1 " equals 400 '	05/14/2008	070-508	2

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ATTACHMENT A

APPLICATION FOR PERMIT TO CONSTRUCT ACROSS OR ALONG A STREAM AND INDIVIDUAL 401 WATER QUALITY CERTIFICATION

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES & ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRNOMENTAL PROTECTION
DIVISION OF WATER

APPLICATION FOR PERMIT TO CONSTRUCT ACROSS OR ALONG A STREAM AND / OR WATER QUALITY CERTIFICATION

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   TELEPHONE #: (614)508-3612 **EMAIL:** Mike.McBrayer@opusnorth.com
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   ADDRESS: 4274 Glendale-Milford Road, Cincinnati, OH 45242
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(a) PUBLIC NOTICE HAS BEEN GIVEN FOR THIS PROPOSAL BY THE FOLLOWING MEANS:

_X_ **Public notice in newspaper having greatest circulation in area (provide newspaper clipping or affidavit)**

____ **Adjacent property owner(s) affidavits** (Contact Division of Water for requirements.)

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SIGNATURE: _____

Owner or Agent sign here. (If signed by Agent, a Power of Attorney should be attached.)

DATE: 3-16-09

SIGNATURE OF LOCAL FLOODPLAIN COORDINATOR:

_____

Permit application will be returned to applicant if not properly endorsed by the local floodplain coordinator.

DATE: _____

SUBMIT APPLICATION AND ATTACHMENTS TO:

Floodplain Management Section
Division of Water
14 Reilly Road
Frankfort, KY 40601

COMMONWEALTH OF KENTUCKY
ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER

INDIVIDUAL KENTUCKY WATER QUALITY CERTIFICATION FEE PAYMENT

401 KAR 9:020 Section 401 Water Quality Certification Fees and Certification Timetable

KRS 224.16-050 authorizes the cabinet to certify pursuant to 33 U.S.C. 1341 that applicants for a federal permit regarding the construction or operation of facilities, which may result in a discharge of dredged or fill material into the waters of the Commonwealth, as defined in KRS 224.01-010(33), shall comply with the applicable provisions of the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq. KRS 224.10-100 authorizes the cabinet to establish a fee for the cost of processing applications for permits authorized under KRS Chapter 224. The project may not start until all necessary fees are paid and approvals are received from KDOW. For questions concerning the WQC process, contact the WQC Section at 502-564-3410. For more information: HTTP://WWW.WATER.KY.GOV/PERMITTING/WQCERT/

1. **OWNER:** Opus North Corporation/Mr. Michael McBrayer
   Provide name of person(s), company, governmental unit or other owner of proposed project.

   MAILING ADDRESS: 600 North Cleveland Avenue, Suite 190, Westerville, OH 43082

   TELEPHONE #: (614)508-3612 **E-MAIL:** Mike.McBrayer@opusnorth.com

   AGENCY INTEREST (AI) # OF PROJECT: _____ **(assigned by KDOW)**

2. **AGENT:** Civil & Environmental Consultants, Inc./Daniel J. Godec
   Provide name of person(s) submitting application, if other than owner.

   ADDRESS: 4274 Glendale-Milford Road, Cincinnati, OH 45242

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4. **COUNTY:** Boone **NEAREST COMMUNITY:** Hebron, Kentucky

5. **STREAM NAME(S):** Unnamed intermittent and ephemeral tributaries to Woolper Creek
   LATITUDE/LONGITUDE: 39°4'34.4"N; 84°43'22.3"W at the southern most portion of the Site (reference attached sheet for tabulated summary of additional coordinates.
   (Start and end points of each individual impact; add more sheets if necessary.)

7. **TOTAL LINEAR FEET OF STREAM IMPACTED:** Approximately 2,939 linear feet
   WETLAND ACRES IMPACTED: Approximately 0.22 acres

8. **EXEMPTED FROM FEE BECAUSE:**

   (A) {Personal Residence: _____ **(B) Agricultural Operation:** _____

9. **FEES:**

Stream impact greater than 500 linear feet and less than 1,000 linear feet:	**Fee - $1,000.00** _____
Stream impact 1,000 linear feet to 5,000 linear feet:	**Fee - $2,500.00** X
Stream impact greater than 5,000 linear feet:	**Fee - $,5000.00** _____
Wetland impacts	**Fee $500.00 per acre not to exceed $5,000.00**
	Total Fee Paid: $2,500.00

To the best of my knowledge, all the information provided is true and correct.

SIGNATURE: _____ **DATE:** 3-16-09
Owner or Agent sign here. (If signed by Agent, attach Power of Attorney.)

Make check to: KY STATE TREASURER

MAIL TO:

Kentucky Division of Water
Water Quality Certification Section
200 Fair Oaks Lane
Frankfort, KY 40601

Proposed Hebron Industrial Park
Litton Lane, Hebron, Boone County, Kentucky
Opus North Corporation

Summary of Stream Impact Coordinates
for
Individual Kentucky Water Quality Certification Fee Payment

MAP_LABEL	POSITION	Longitude (DD)	Latitude (DD)	Longitude (DMS)	Latitude (DMS)
Pond	Begin	-84.723891	39.080277	-84 43 26	39 04 48
Pond	End	-84.724399	39.080309	-84 43 27	39 04 49
Stream 1	Begin	-84.723038	39.077564	-84 43 22	39 04 39
Stream 1	End	-84.722795	39.078163	-84 43 22	39 04 41
Stream 2	Begin	-84.722076	39.077501	-84 43 19	39 04 39
Stream 2	End	-84.723380	39.078838	-84 43 24	39 04 43
Stream 2b	Begin	-84.722314	39.077287	-84 43 20	39 04 38
Stream 2b	End	-84.722230	39.077628	-84 43 20	39 04 39
Stream 3 - eph	Begin	-84.721269	39.078706	-84 43 16	39 04 43
Stream 3 - Int	Begin	-84.723077	39.078835	-84 43 23	39 04 43
Stream 3 - Int	End	-84.725221	39.079251	-84 43 30	39 04 45
Stream 3 -eph	End	-84.723077	39.078835	-84 43 23	39 04 43
Stream 4	Begin	-84.725037	39.079007	-84 43 30	39 04 44
Stream 4	End	-84.725080	39.079204	-84 43 30	39 04 45
Stream 5 - eph	Begin	-84.724280	39.080439	-84 43 27	39 04 49
Stream 5 - eph	End	-84.724961	39.080105	-84 43 29	39 04 48
Stream 5 - Int	Begin	-84.724961	39.080105	-84 43 29	39 04 48
Stream 5 - Int	End	-84.725292	39.080086	-84 43 31	39 04 48
Stream 8	Begin	-84.722243	39.079048	-84 43 20	39 04 44
Stream 8	End	-84.722351	39.078906	-84 43 20	39 04 44
Wetland 1	Begin	-84.722563	39.078898	-84 43 21	39 04 44
Wetland 1	End	-84.723077	39.078829	-84 43 23	39 04 43
Wetland 2	Begin	-84.723439	39.080569	-84 43 24	39 04 50
Wetland 2	End	-84.723922	39.080316	-84 43 26	39 04 49

ATTACHMENT B

JURISDICTIONAL WATERS DELINEATION REPORT

JURISDICTIONAL WATERS DELINEATION REPORT

OPUS NORTH CORPORATION
38.8-ACRE HEIMAN/MCGLASSON PROPERTY
HEBRON, BOONE COUNTY, KENTUCKY

Prepared for:

OPUS NORTH CORPORATION

Prepared by:

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
CINCINNATI, OHIO

CEC Project No. 070-508.0002

April 18, 2008

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Wetland Determination Data Forms I
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1.0 INTRODUCTION

1.1 GENERAL INFORMATION

This report presents the findings of a wetland and stream delineation conducted at the 38.8-Acre Heiman/ McGlasson Property (the Property), located in Hebron, Boone County, Kentucky (see Figure 1). The Property is composed of two irregularly-shaped adjacent parcels of land located near the western end of Litton Lane, south of and adjacent to I-275. The Property consists of old field, early successional forest, and second growth forest habitats.

The wetland and stream delineation site visit was conducted by Civil & Environmental Consultants, Inc. (CEC) on March 4, 2008, March 17, 2008, and April 2, 2008.

1.2 METHODOLOGY

The purpose of the study was to identify and delineate the boundaries of wetlands and other jurisdictional waters within the proposed project area. The delineation was based on CEC's professional judgment and interpretation of the technical criteria presented in the 1987 *U.S. Army Corps of Engineers Wetlands Delineation Manual* (USACE 1987).

The wetland delineation was conducted using the routine on-site determination method described in the 1987 Corps Manual, supplemented by the *National List of Plant Species That Occur in Wetlands: Northeast Region (Region 1)* (Reed 1988) and *Hydric Soils of the United States* (USDA 1991). Additionally, in areas where disturbance had occurred, CEC made assumptions based upon historic information contained in the soil survey and observed current site conditions. CEC completed the following scope of services to identify and delineate jurisdictional wetland boundaries at the site:

1. Office Data Review: CEC personnel reviewed the U.S. Geological Survey (USGS) topographic map (Figure 1), U.S. Department of Agriculture (USDA) *Soil Survey of Boone, Campbell, and Kenton Counties, Kentucky* (USDA 1989, Figure 2), U.S. Fish & Wildlife Service (USFWS) National Wetlands Inventory (NWI) Map (Figure 3),

and the USDA Natural Resources Conservation Service (NRCS) list of hydric soils for Boone County, Kentucky (USDA 2007). These resources were used to establish site characteristics that aided in the identification of potential wetland areas.

2. Site Reconnaissance: CEC performed the wetland delineation on March 4, 2008, March 17, 2008, and April 2, 2008. The wetland delineation work was completed using the routine on-site determination method. First, plant communities present on the site were identified. The dominant plant species within each community were identified and an assessment was made on whether or not the plant community was dominated by hydrophytic (wetland) plants. Next, a representative test site was located within the plant community and soils were sampled using a spade shovel to assess the presence of hydric soil indicators. Lastly, the test site was inspected for indicators of wetland hydrology (ponding, soil saturation, etc.) were present. If areas having wetland vegetation, hydric soils, and wetland hydrology were found, a test site was located outside the wetland to delineate where the wetland boundary could be located. Additionally, wetlands (if located on the site) were marked in the field with consecutively numbered surveyor's ribbon flags and subsequently located onto the Burlington, Kentucky quadrangle of the USGS 7.5-minute topographic map using a Trimble GeoXT Global Positioning System (GPS) unit. Other potential jurisdictional waters, such as ephemeral, intermittent or perennial streams located within the Property, were also identified, where applicable.

3. Data Collection: Data forms for the routine on-site determination method were completed for ten representative locations within the Property boundaries (see Figure 4 for locations and Appendix I for the wetland data forms). The data forms were completed to record the vegetation, soils and hydrology at each test site. Photographs of the wetlands, streams, and other representative habitats present on the Property were also taken (Appendix II).

4. Preparation of Wetland and Stream Delineation Report: This wetland and stream delineation report documents CEC's methodology, findings, wetland delineation map, regulatory considerations, and conclusions.

2.0 FINDINGS

2.1 NATIONAL WETLANDS INVENTORY MAP

NWI maps have been prepared by the USFWS based on high altitude infrared aerial photography and limited ground truthing. Wetlands and deep-water habitats are identified on these maps and classified according to the system developed by Cowardin and co-workers (1979). The NWI map for the Burlington, Kentucky quadrangle identified one wetland, a PUBHh, as being present within the Property boundary (Figure 3). This means, according to the Cowardin classification system, that the wetland is a palustrine wetland (P) with an unconsolidated bottom (UB) that is permanently flooded (H) and has been diked/impounded (h).

2.2 SOILS

The *Soil Survey of Boone, Campbell, and Kenton Counties, Kentucky* (USDA 1989) shows three soil mapping units on the Property. The soil mapping units identified at the Property are summarized in Table 1. The soils map is presented as Figure 2.

TABLE 1
SOILS INFORMATION
Proposed Hebron Industrial Park
Boone County, Kentucky

Soil Mapping Unit Name (Symbol)	Taxonomy	Hydric Soil List Designation
Jessup silt loam, 12 to 20 percent slopes (JeD)	Typic Hapludalfs	Not Hydric
Rossmoyne silt loam, 0 to 6 percent slopes (RsB)	Aquic Fraguidalfs	Not Hydric
Rossmoyne silt loam, 6 to 12 percent slopes (RsC)	Aquic Fragiudalfs	Not Hydric

None of the three soil units identified in the study area are listed as hydric by the NRCS (USDA 2007).

2.3 PLANT COMMUNITIES

The Property consists of second growth forest, early successional forest, old fields, and an open water/ pond. The second growth forest was in the northwestern portion of the Property, the early successional forest in the eastern portion, the old fields in the central and southern portions, and the pond is present in the north-central portion of the Property. The vegetation found in each wetland sample point has been detailed in the individual wetland determination data forms presented in Appendix I. Representative photos of each habitat type identified on the Property are presented in Appendix II.

The overstory of the second growth forest within the Property was dominated by sugar maple (*Acer saccharum*), white ash (*Fraxinus americana*), common hackberry (*Celtis occidentalis*), box elder (*Acer negundo*), American sycamore (*Platanus occidentalis*), and black cherry (*Prunus serotina*). The understory of this area was dominated by white snake root (*Eupatorium rugosum*), garlic mustard (*Alliaria petiolata*), Amur honeysuckle (*Lonicera maackii*), ground ivy (*Glechoma hederacea*), multiflora rose (*Rosa multiflora*), Japanese honeysuckle (*Lonicera japonica*), and white avens (*Geum canadense*). The overstory of the early successional forest was predominantly white ash, common hackberry, and box elder, although the other species were present as well. The understory was similar to that of the second growth forest. In general, the understory of the second growth and early successional forests was variable but included areas with large patches of Amur honeysuckle.

The overstory of old field habitats, including scattered portions of early successional forest, was dominated by smooth sumac (*Rhus glabra*), common hackberry, box elder, and white ash. The understory of the old field areas was dominated by Allegheny blackberry (*Rubus allegheniensis*), multiflora rose, garlic mustard, Japanese honeysuckle, and various species of goldenrod (*Solidago* spp.) and grasses.

2.4 HYDROLOGY

Using CEC's professional judgment and field indicators such as flow, substrate composition, embeddedness, defined bed and banks, and vegetation, CEC identified the following streams within the Project area: an unnamed ephemeral/intermittent tributary of Woolper Creek, three unnamed ephemeral tributaries of Stream 3 (Stream 2, Stream 4, and Stream 8), one unnamed ephemeral/intermittent tributary of Stream 3 (Stream 5), two unnamed ephemeral tributaries of Stream 2 (Stream 1 and Stream 2B), and two unnamed ephemeral tributaries of Stream 5 (Stream 6 and Stream 7). The limits of the streams were recorded in the field with a Trimble GeoXT GPS unit, and subsequently transferred to Figure 4. The on-site lengths are summarized below.

The Property primarily consists of rolling hills. Ground surface elevations on the Property are mapped to range from approximately 835 to 895 feet above mean sea level. As seen in Figure 4, hydrologic features on the Property include eight unnamed ephemeral streams (Streams 1, 2, 2B, 4, 6, 7, 8, and 9) and two unnamed ephemeral/intermittent streams (Stream 3 and Stream 5; Figure 4). Drainage on the Property is generally east to west. Based on CEC's observations, the ephemeral streams appear to be primarily providing conveyance of storm water during and immediately after precipitation events.

TABLE 2
STREAM INFORMATION
Proposed Hebron Industrial Park
Boone County, Kentucky

Stream Segment Identifier	Approximate On-site Length (linear feet)	
	Ephemeral	Intermittent
Stream 1	238	NA[1]
Stream 2	643	NA
Stream 2B	134	NA
Stream 3	591	592
Stream 4	85	NA
Stream 5	401	372
Stream 6	118	NA
Stream 7	101	NA
Stream 8	63	NA
Stream 9	86	NA
TOTAL	**2,460**	**964**

[1] Not Applicable

A summary of the streams observed on the Property is presented below:

- Stream 1 originates on the Property and flows north into Stream 2 on the Property. Stream 1 is approximately 1 foot wide and primarily contains silt substrates.
- Stream 2 originates east of the Property. This stream flows across the eastern portion of Property and drains into Stream 3 in the center of the Property. Stream 2 varies in width from approximately 1 to 3 feet wide and primarily contains silt substrates.
- Stream 2B originates in the southwestern portion of the Property and drains northwest into Stream 2 in the Property. Stream 2B is approximately 1 foot wide and primarily contains silt substrates.
- Stream 3 originates in the eastern portion of the Property, drains through the center of the Property and exits the Property to the west. Stream 3 varies from approximately 3 feet wide in the eastern portion of the Property to 10 feet wide on the western edge of the Property, and contains a mixture of silt, muck, gravel, sand, and woody debris as substrates.
- Stream 4 originates west of the Property and drains north into Stream 3 within the Property. Stream 4 is approximately 2 feet in width and primarily contains silt substrates.
- Stream 5 originates at Pond 1 and drains west out of the Property and into Stream 3. Stream 5 varies in width from about 1 foot wide at Pond 1 to 5 feet wide at the western edge of the Property, and contains a mixture of silt, sand, gravel, muck, woody debris, and cobble substrates.
- Stream 6 originates within the Property and drains south into Stream 5 within the Property. Stream 6 is approximately 1 foot in width and primarily contains silt, muck and woody debris as substrates.
- Stream 7 originates from roadside drainage of Interstate Route 275 north of the Property and drains southwest through the Property and into Stream 3. Stream 7 is approximately 4 feet in width and primarily contains sand, silt, and muck substrates.
- Stream 8 originates in the eastern portion of the Property and drains south into Stream 3 within the Property. Stream 8 varies from approximately 1 to 2 feet in width and primarily contains silt and muck substrates.
- Stream 9 originates within the northeastern portions of the Property and drains into Stream 3 just east of the eastern boundary of the Property. Stream 9 averages approximately 3 feet wide and contains silt substrates.

One open water area (Pond 1), comprising 0.27 acre, was identified on the Property. The open water area is directly adjacent to Wetland 2. Drainage of the open water area is by means of Stream 5.

TABLE 3 OPEN WATER AREA INFORMATION Proposed Hebron Industrial Park Boone County, Kentucky	
Open Water Area Identifier	**On-site Area (acres)**
Pond 1	0.27
TOTAL	0.27

2.5 Wetlands

During the site visits, CEC sampled wetland determination test pits using the on-site wetland determination method described above in Section 1.2. CEC focused on areas shown as having areas with vegetation that appeared to be potentially hydrophytic, and/or on areas shown on the NWI maps as being within a wetland.

Ten sites within the Property were sampled using the on-site wetland determination method. The wetland determination data forms for these 10 sites are provided in Appendix I, and representative photos of the wetland determination sample sites are provided in Appendix II. The location of these wetland determination test sites were recorded using a Trimble GeoXT GPS unit. The locations of sites sampled using the on-site wetland determination method are shown on Figure 4. The photograph locations are shown on Figure 5.

Field investigations resulted in the identification of two interpreted wetlands present within the Property (Wetlands 1 and 2) as summarized below and in Table 4:

- Wetland 1 consists of a palustrine forested wetland located on the floodplain of Stream 3. The wetland comprises approximately 0.09 acre (Figure 4). The overstory of this wetland is dominated by American sycamore, red maple (*Acer rubrum*), box elder, green ash (*Fraxinus pennsylvanica*), and red elm (*Ulmus rubra*). The understory of this wetland is dominated by garlic mustard and multiflora rose.
- Wetland 2 consists of a palustrine emergent wetland located between Pond 1 and Interstate 275. The wetland comprises approximately 0.13 acre. This wetland is dominated by rice cut-grass (*Leersia oryzoides*), green bulrush (*Scirpus atrovirens*), boneset (*Eupatorium perfoliatium*), creeping jenny (*Lysimachia nummularia*) and multiflora rose (*Rosa multiflora*).

TABLE 4 WETLAND IMPACTS Proposed Hebron Industrial Park Boone County, Kentucky		
Open Water Area Identifier	**Wetland Classification**	**Acreage Within Construction Easement**
Wetland 1	Palustrine Forested	0.09
Wetland 2	Palustine Emergent	0.13
TOTAL	--	0.22

3.0 REGULATORY CONSIDERATIONS

3.1 MEETINGS WITH REGULATORY AGENCIES

No meetings between regulatory agencies and CEC have taken place at the time this report was prepared. The jurisdictional waters delineation findings presented in this document were developed based upon CEC's professional training and experience, and the results of the March 4 and April 12, 2008, site visit.

3.2 REGULATORY ISSUES

Impacts to jurisdictional streams and wetlands are regulated in the state of Kentucky by the U. S. Army Corps of Engineers (USACE) and the Kentucky Division of Water (KDOW). Discharges of dredged or fill material into waters of the United States, as well as relocation of waters of the United States, require permits from the USACE under the provisions of Section 404 of the Clean Water Act, as well as Section 401 Water Quality Certification from the KDOW.

Based on the results of the jurisdictional waters delineation, CEC identified approximately 3,424 linear feet of interpreted jurisdictional streams on the property. It is noted that this stream length is "all inclusive" and may include significant portions of streams that may not be impacted as part of Opus' proposed construction.

A formal Jurisdictional Determination from the USACE and KDOW is required to verify CEC's wetland delineation findings, prior to initiation of permit issuance. The jurisdictional determination may require a site visit by these agencies.

Two types of Section 404 Clean Water Act permits are available from the USACE to those seeking to develop property. The first type is a Nationwide Permit, which generally covers impacts to less than 200 linear feet of perennial or intermittent streams, less than 300 linear feet of ephemeral streams, or less than 0.5 acre of combined wetland and stream impacts. A pre-construction notification would be required for a Nationwide Permit. If impacts to streams and

wetlands exceed these linear foot and/or acreage limitations, then an Individual Section 404 Permit would likely be required from the USACE and Section 401 Water Quality Certification would be required from the KDOW.

Individual Permits and Section 401 Water Quality Certification require a sequencing review. Sequencing requires the permit applicant to demonstrate that the project purpose cannot be accomplished without impacting wetlands and other jurisdictional waters. If this can be demonstrated, then the applicant is required to further demonstrate that the scope of the project has been revised to minimize impacts to jurisdictional waters. The sequencing process requires that an alternatives analysis be performed, and that the alternatives analysis must address other potential sites. Alternative site plans which attempt to avoid or minimize jurisdictional water impacts must be developed and evaluated. The regulatory agencies will only consider mitigation of jurisdictional water impacts after satisfactory completion of the sequencing requirements. A mitigation plan will be required for unavoidable impacts to jurisdictional streams, open waters, and wetlands.

4.0 CONCLUSIONS

Ten interpreted jurisdictional streams, one pond comprising 0.27 acre, and two interpreted jurisdictional wetlands comprising 0.22 acre were identified and delineated by CEC within the Property during the site visit. The interpreted jurisdictional streams include two ephemeral/intermittent streams totaling approximately 1,956 linear feet (992 ephemeral linear feet and 964 intermittent linear feet) and eight ephemeral streams totaling approximately 2,270 linear feet. Locations of potentially jurisdictional streams and wetlands were recorded by CEC using a Trimble GeoXT GPS unit. The locations of the interpreted jurisdictional streams, wetlands, and pond are presented in Figure 4. Based on CEC's observations, the ephemeral streams appear to be primarily providing conveyance of storm water during and immediately after precipitation events.

5.0 LEVEL OF CARE

The jurisdictional waters delineation services performed by CEC were conducted in a manner consistent with the criteria contained in the 1987 Corps Manual and with the level of care and skill ordinarily exercised by members of the environmental consulting profession practicing contemporaneously under similar conditions in the locality of the project. It must be recognized that the jurisdictional waters delineation was based on field observations and CEC's professional interpretation of the criteria in the 1987 Corps Manual at the time of our fieldwork. Jurisdictional waters determinations may change subsequent to CEC's delineation based on changes in the regulatory criteria, seasonal variations in hydrology, alterations to drainage patterns and other human activities and/or land disturbances. Therefore, the findings and opinions are relevant to the dates of our site activities and should not be relied on to represent conditions at substantially later dates. References herein to interpreted jurisdictional waters on the subject property are the opinion of CEC and are subject to change pending formal review by the USACE and/or KDOW. The actual regulated extent and limits of jurisdictional waters are not established until formally sanctioned by the USACE and KDOW as part of a Jurisdictional Determination.

This report is intended for the use of Opus North Corporation only, consistent with the qualifications outlined herein and the terms and conditions of CEC's proposal. Our services have been performed under mutually agreed upon terms and conditions. If other parties wish to rely on this report, please have them contact us so that a mutual understanding and agreement of the terms and conditions for our services can be established prior to their use of this information.

6.0 REFERENCES

Cowardin, L. M., V. Carter, and F. C. Golet. 1979. Classification of Wetlands and Deep Water Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service. Washington D. C. FWS/OBS-79/31.

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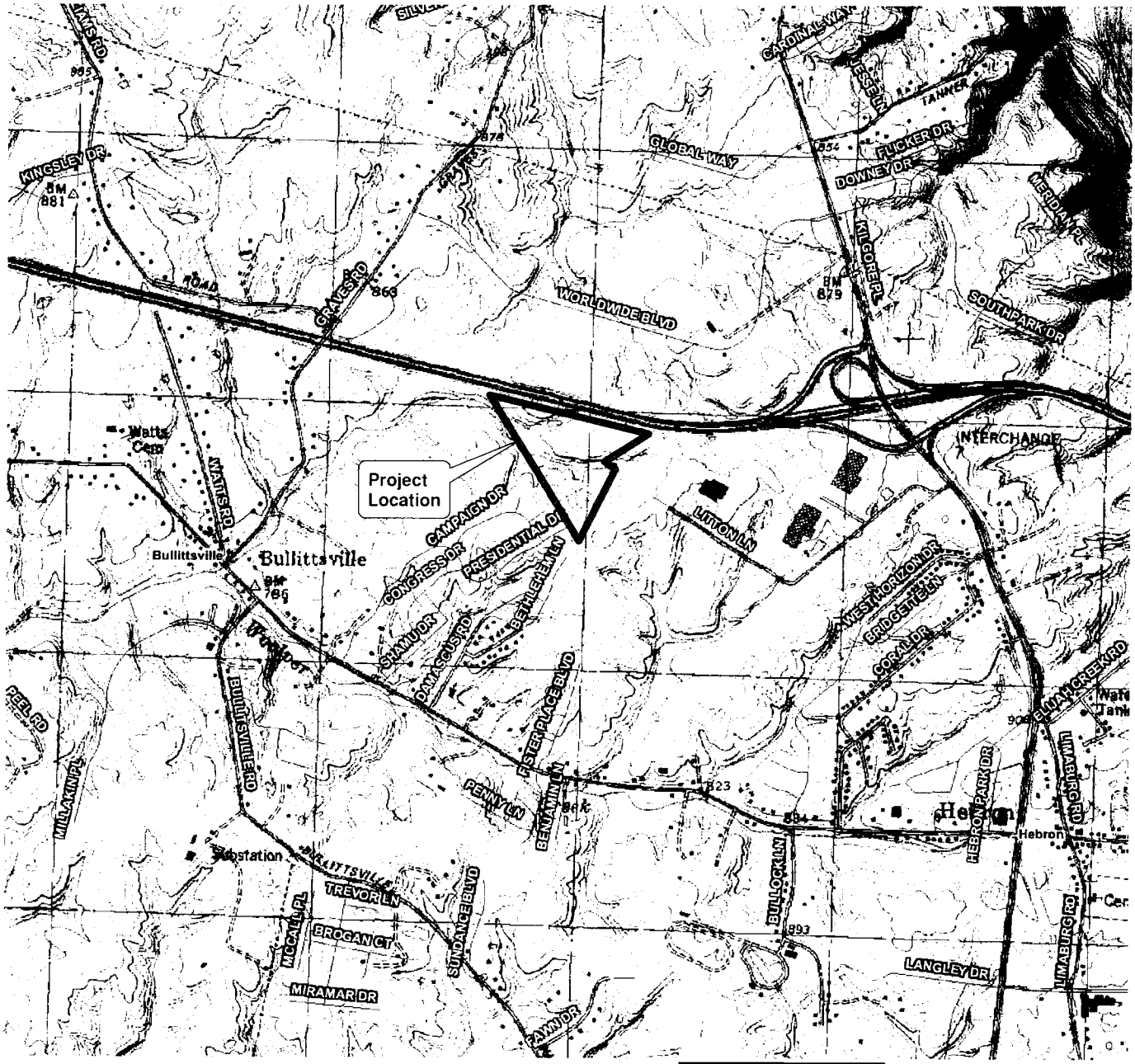
United States Department of Agriculture Natural Resources Conservation Service (USDA). 2007. Soil Data Mart: Kentucky Counties. http://soildatamart.nrcs.usda.gov/County.aspx?State=KY Accessed March 5, 2008.

FIGURES



SOURCE: USGS 7.5-MINUTE TOPOGRAPHIC QUADRANGLE MAP - BURLINGTON, KENTUCKY, 1984.

Civil & Environmental Consultants, Inc.
Cincinnati, OH
(513) 985-0226 (800) 759-5614
Pittsburgh, PA Chicago, IL Cleveland, OH Columbus, OH Detroit, MI
Export, PA Indianapolis, IN Nashville, TN St. Louis, MO

Site Location Map

OPUS NORTH CORPORATION

Hebron Industrial Park -
Heiman/McGlasson Property
Hebron, Boone County, Kentucky

DWN. BY: MJB	SCALE: 1 " equals 2,000 feet	DATE: 03/05/2008	PROJECT NO: 070-508	FIGURE NO: 1
CHKD. BY: MAVB				

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300 0 300 600 Feet

N

Soil Features

Approximate Site Boundary

SOURCE:SOILS DATA OBTAINED FROM THE USDA NCRS WEBSITE (http://soildatamart.nrcs.usda.gov/), DATE.
PORTION OF AN ESRI IMAGE MAP SERVICE - http://services.arcgisonline.com/v92, SERVICE NAME - I3_Imagery_Prime_World_2D

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Pittsburgh, PA Chicago, IL Cleveland, OH Columbus, OH Detroit, MI
Export, PA Indianapolis, IN Nashville, TN St. Louis, MO

U.S.D.A. Soils Map

OPUS NORTH CORPORATION

Hebron Industrial Park -
Heiman/McGlasson Property
Hebron, Boone County, Kentucky

DWN. BY: MJB	SCALE:	DATE:	PROJECT NO:	FIGURE NO:
CHKD. BY: MAVB	1 " equals 600 '	03/05/2008	070-508	2

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300 0 300 600 Feet

N

NWI Wetland Features

Approximate Site Boundary

SOURCE:NWI MAPPING INFORMATION OBTAINED FROM THE USFWS WEBSITE, 2007. (http://wetlandswms.er.usgs.gov/imf/imf.jsp?site=extract_tool), . PORTION OF AN ESRI IMAGE MAP SERVICE - http://services.arcgisonline.com/v92, SERVICE NAME - I3_Imagery_Prime_World_2D

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Export, PA Indianapolis, IN Nashville, TN St. Louis, MO

National Wetlands Inventory Map
OPUS NORTH CORPORATION
Hebron Industrial Park - Heiman/McGlasson Property
Hebron, Boone County, Kentucky

DWN. BY: MJB	SCALE:	DATE:	PROJECT NO:	FIGURE NO:
CHKD. BY: MAVB	1 " equals 600 '	03/05/2008	070-508	3

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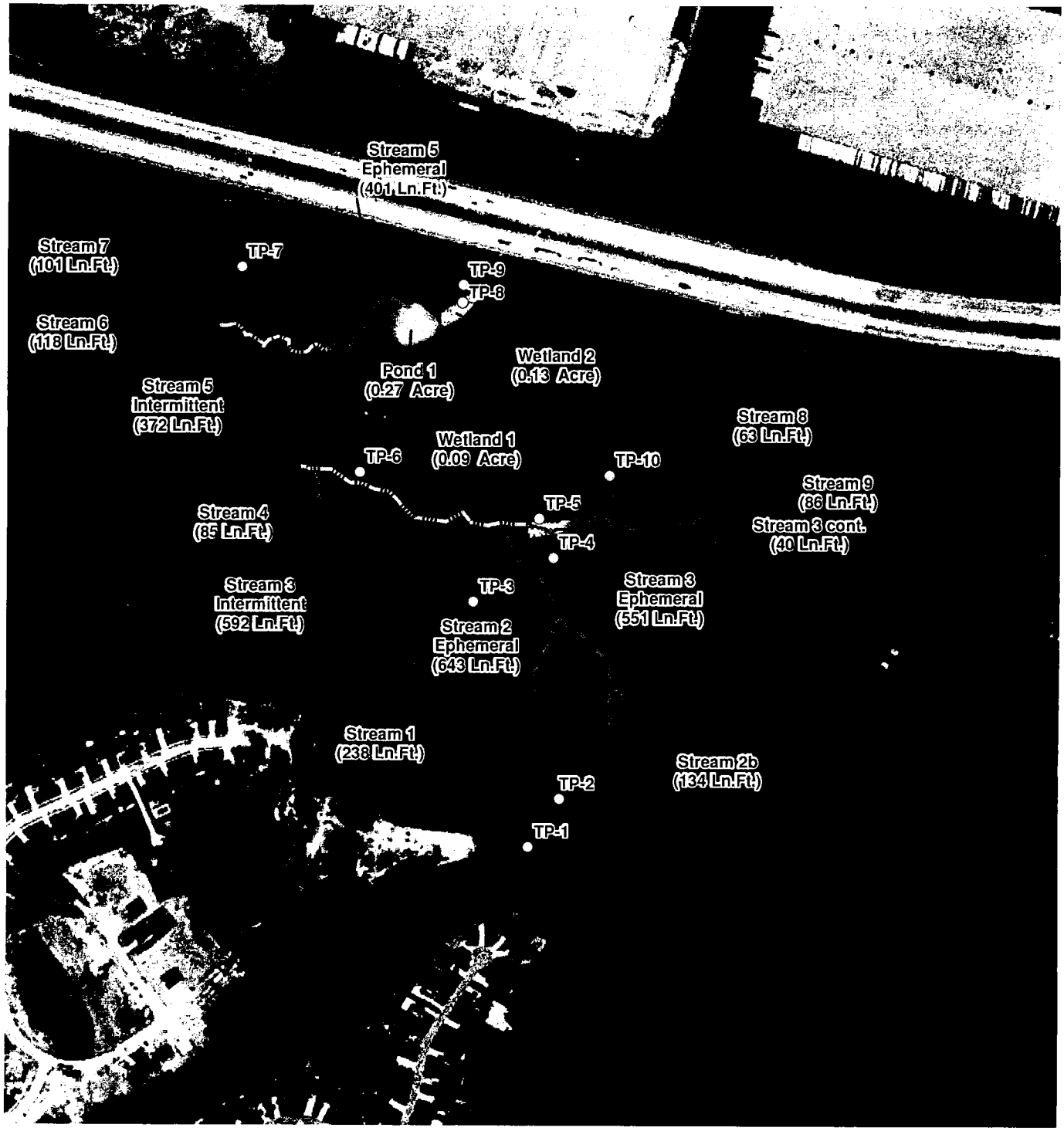

200 0 200 400 Feet

N

Wetland Determination Test Pit
Ephemeral Stream
Intermittent Stream
Pond Length
Pond Feature
Wetland Feature
Approximate Site Boundary

SOURCE: PORTION OF AN ESRI IMAGE MAP SERVICE - http://services.arcgisonline.com/v92, SERVICE NAME - I3_Imagery_Prime_World_2D

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Jurisdictional Waters Delineation Map

OPUS NORTH CORPORATION

Hebron Industrial Park -
Heiman/McGlasson Property
Hebron, Boone County, Kentucky

DWN. BY: MJB	SCALE:	DATE:	PROJECT NO:	FIGURE NO:
CHKD. BY: MAVB	1 " equals 400 '	03/05/2008	070-508	4

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175 0 175 350
Feet

1 Photo Location

Approximate Site Boundary

SOURCE: PORTION OF AN ESRI IMAGE MAP SERVICE - http://services.arcgisonline.com/v92, SERVICE NAME - I3_Imagery_Prime_World_2D - CINCINNATI2003.

Civil & Environmental Consultants, Inc.
Cincinnati, OH
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Pittsburgh, PA Chicago, IL Cleveland, OH Columbus, OH Detroit, MI
Export, PA Indianapolis, IN Nashville, TN St. Louis, MO

Photograph Location Map
OPUS NORTH CORPORATION
Hebron Industrial Park - Heiman/McGlasson Property
Hebron, Boone County, Kentucky

DWN. BY: MJB	SCALE:	DATE:	PROJECT NO:	FIGURE NO:
CHKD. BY: MAVB	1 " equals 350 '	03/05/2008	070-508	5

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APPENDIX I

WETLAND DETERMINATION DATA FORMS

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetland Delineation Manual)

Project/Site:	070-508 Litton Lane Property, Hebron, KY		**Date:** March 4, 2008
Applicant/Owner:	Opus North Corporation		**County:** Boone
Investigator(s):	Matt Lauffer, Lindsey Hesch		**State:** KY
Do normal circumstances exist on the site?	Yes X	No	**Community ID:**
Is the site significantly disturbed (Atypical?)	Yes	No X	old field
Is the area a potential problem area?	Yes	No X	**Plot ID:** TP-1
(if needed, explain on reverse.)			

VEGETATION

Dominant Plant Species:	Stratum:	Indicator:	Dominant Plant Species:	Stratum:	Indicator:
1. *Lonicera maackii*	Shrub	UPL	10.		
2. *Robinia pseudoacacia*	Tree	FACU-	11.		
3.			12.		
4.			13.		
5.			14.		
6.			15.		
7.			16.		
8.			17.		
9.			18.		

Percent of dominant species that are OBL, FACW or FAC (and excluding FAC-) = 0%

Remarks:

HYDROLOGY

_____ Recorded Data (Describe in Remarks)
_____ Stream, Lake, or Tide Gauge
__X__ Aerial Photographs
_____ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 (inches)

Depth to Free Water in Pit: 8 (inches)

Depth to Saturated Soil: 8 (inches)

Wetland Hydrology Indicators:
Primary Indicators:
_____ Inundated
__x__ Saturated in upper 12 inches
_____ Water Marks
_____ Drift Lines
_____ Sediment Deposits
_____ Drainage Patterns in Wetlands

Secondary Indicators:
_____ Oxidized Root Channels in Upper 12 Inches
_____ Water Stained Leaves
_____ Local Soil Survey Data
_____ FAC-Neutral Test
_____ Others (Explain in Remarks)

Remarks:

recent heavy rain and snowmelt

Project/Site: 070-508 / Opus Litton Lane Property, Hebron, KY
Site/Area ID: TP-1

SOILS

Map Unit Name:
(Series and Phase): Rossmoyne silt loam, 0 to 6% slopes (RsB)
(Taxonomy Subgroup): Aquic Fraguidalfs
Drainage Class: moderately well drained
Field Observations Confirm Mapped Type?
Yes X No

Profile Description:

Depth (inches):	Horizon:	Matrix Color (Munsell Moist):	Mottle Colors (Munsell Moist):	Mottle (Abundance/Size):	Texture, Concretions, Structure:
0-6	A	10YR3/3	NA	NA	loam
6-16	B	10YR4/4	NA	NA	clay loam

Hydric Soil Indicators:

	Histosol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer in Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soil
	Aquic Moisture Regimes		Listed on Local Hydric Soils List
	Reducing Conditions		Listed on National Hydric Soils List
	Gleyed or Low Chroma Colors		Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes		No	X
Wetland Hydrology Present?	Yes	X	No	
Hydric Soils Present?	Yes		No	X

Is this Sampling Point Within a Wetland?
Yes
No X

Remarks:

recent heavy rain may have caused unusual satuation level of soils

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetland Delineation Manual)

Project/Site:	070-508 Litton Lane Property, Hebron, KY		**Date:** March 4, 2008
Applicant/Owner:	Opus North Corporation		**County:** Boone
Investigator(s):	Matt Lauffer, Lindsey Hesch		**State:** KY
Do normal circumstances exist on the site?	Yes X	No	**Community ID:**
Is the site significantly disturbed (Atypical?)	Yes	No X	old field
Is the area a potential problem area?	Yes	No X	**Plot ID:** TP-2
(if needed, explain on reverse.)			

VEGETATION

Dominant Plant Species:	Stratum:	Indicator:	Dominant Plant Species:	Stratum:	Indicator:
1. *Rubus allegheniensis*	Shrub	FACU-	10.		
2. *Solidago canadensis*	Herb	FACU	11.		
3. *Lonicera japonica*	Woody Vine	FAC-	12.		
4. *Rhus glabra*	Shrub	UPL	13.		
5. *Fraxinus americana*	Shrub	FACU	14.		
6. *Poa* sp.	Herb	NI	15.		
7. *Rosa multiflora*	Shrub	FACU	16.		
8.			17.		
9.			18.		

Percent of dominant species that are OBL, FACW or FAC (and excluding FAC-) = 0%

Remarks:

HYDROLOGY

_____ Recorded Data (Describe in Remarks)
_____ Stream, Lake, or Tide Gauge
X Aerial Photographs
_____ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 (inches)

Depth to Free Water in Pit: 10 (inches)

Depth to Saturated Soil: 10 (inches)

Wetland Hydrology Indicators:
Primary Indicators:
_____ Inundated
X Saturated in upper 12 inches
_____ Water Marks
_____ Drift Lines
_____ Sediment Deposits
_____ Drainage Patterns in Wetlands

Secondary Indicators:
_____ Oxidized Root Channels in Upper 12 Inches
_____ Water Stained Leaves
_____ Local Soil Survey Data
_____ FAC-Neutral Test
_____ Others (Explain in Remarks)

Remarks:

Recent heavy rain appears to have caused unusually high water table levels

Project/Site: 070-508 / Opus Litton Lane Property, Hebron, KY
Site/Area ID: TP-2

SOILS

Map Unit Name:
(Series and Phase): Rossmoyne silt loam, 6 to 12% slopes (RsC) Drainage Class: moderately well drained
(Taxonomy Subgroup): Aquic Fraguidalfs Field Observations Confirm Mapped Type?
Yes X No

Profile Description:

Depth (inches):	Horizon:	Matrix Color (Munsell Moist):	Mottle Colors (Munsell Moist):	Mottle (Abundance/Size):	Texture, Concretions, Structure:
0-10	A	10YR 4/4	NA	NA	loam
10-16	B	10YR 4/6	NA	NA	clay loam

Hydric Soil Indicators:

	Histosol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer in Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soil
	Aquic Moisture Regimes		Listed on Local Hydric Soils List
	Reducing Conditions		Listed on National Hydric Soils List
	Gleyed or Low Chroma Colors		Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes		No	X
Wetland Hydrology Present?	Yes	X	No	
Hydric Soils Present?	Yes		No	X

Is this Sampling Point Within a Wetland?
Yes
No X

Remarks:

Recent heavy rain appears to have caused unusually high water table levels

DATA FORM
ROUTINE WETLAND DETERMINATION
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Project/Site:	070-508 Litton Lane Property, Hebron, KY		**Date:** March 4, 2008
Applicant/Owner:	Opus North Corporation		**County:** Boone
Investigator(s):	Matt Lauffer, Lindsey Hesch		**State:** KY
Do normal circumstances exist on the site?	Yes X	No	**Community ID:**
Is the site significantly disturbed (Atypical?)	Yes	No X	forest floodplain
Is the area a potential problem area?	Yes	No X	**Plot ID:** TP-3
(if needed, explain on reverse.)			

VEGETATION

Dominant Plant Species:	Stratum:	Indicator:	Dominant Plant Species:	Stratum:	Indicator:
1. *Fraxinus americana*	Tree	FACU	10.		
2. *Acer saccharum*	Tree	FACU-	11.		
3. *Acer negundo*	Tree	FAC+	12.		
4. *Lonicera maackii*	Shrub	UPL	13.		
5. *Rosa multiflora*	Shrub	FACU	14.		
6. *Alliaria petiolata*	Herb	FACU-	15.		
7.			16.		
8.			17.		
9.			18.		

Percent of dominant species that are OBL, FACW or FAC (and excluding FAC-) = 17%

Remarks:

HYDROLOGY

_____ Recorded Data (Describe in Remarks)
_____ Stream, Lake, or Tide Gauge
__X__ Aerial Photographs
_____ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 (inches)

Depth to Free Water in Pit: 0 (inches)

Depth to Saturated Soil: 0 (inches)

Wetland Hydrology Indicators:
Primary Indicators:
_____ Inundated
__x__ Saturated in upper 12 inches
_____ Water Marks
_____ Drift Lines
_____ Sediment Deposits
_____ Drainage Patterns in Wetlands

Secondary Indicators:
_____ Oxidized Root Channels in Upper 12 Inches
_____ Water Stained Leaves
_____ Local Soil Survey Data
_____ FAC-Neutral Test
_____ Others (Explain in Remarks)

Remarks:

Project/Site: 070-508 / Opus Litton Lane Property, Hebron, KY
Site/Area ID: TP-3

SOILS

Map Unit Name:
(Series and Phase): Jessup silt loam, 12 to 20 % slopes (JeD)
(Taxonomy Subgroup): Typic Hapludalfs
Drainage Class: well drained
Field Observations Confirm Mapped Type?
Yes _____ No _____

Profile Description:

Depth (inches):	Horizon:	Matrix Color (Munsell Moist):	Mottle Colors (Munsell Moist):	Mottle (Abundance/Size):	Texture, Concretions, Structure:
0-5	A	2.5Y 3/2	NA	NA	silty loam
5-16	B	10YR 4/3	NA	NA	clay loam

Hydric Soil Indicators:

_____	Histosol	_____	Concretions
_____	Histic Epipedon	_____	High Organic Content in Surface Layer in Sandy Soils
_____	Sulfidic Odor	_____	Organic Streaking in Sandy Soil
_____	Aquic Moisture Regimes	_____	Listed on Local Hydric Soils List
_____	Reducing Conditions	_____	Listed on National Hydric Soils List
_____	Gleyed or Low Chroma Colors	_____	Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes _____	No	X	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	Yes X	No		Yes _____
Hydric Soils Present?	Yes _____	No	X	No X

Remarks:

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Applicant/Owner:	Opus North Corporation		**County:** Boone
Investigator(s):	Matt Lauffer, Lindsey Hesch		**State:** KY
Do normal circumstances exist on the site?	Yes X	No	**Community ID:**
Is the site significantly disturbed (Atypical?)	Yes	No X	forest
Is the area a potential problem area?	Yes	No X	**Plot ID:** TP-4
(if needed, explain on reverse.)			Wetland 1 out point

VEGETATION

Dominant Plant Species:	Stratum:	Indicator:	Dominant Plant Species:	Stratum:	Indicator:
1. *Acer saccharum*	Tree	FACU-	10.		
2. *Fraxinus americana*	Tree	FACU	11.		
3. *Ulmus rubra*	Tree	FAC	12.		
4. *Lonicera maackii*	Shrub	UPL	13.		
5.			14.		
6.			15.		
7.			16.		
8.			17.		
9.			18.		

Percent of dominant species that are OBL, FACW or FAC (and excluding FAC-) = 25%

Remarks:

No herbaceous species present

HYDROLOGY

_____ Recorded Data (Describe in Remarks)	**Wetland Hydrology Indicators:**
_____ Stream, Lake, or Tide Gauge	Primary Indicators:
X Aerial Photographs	_____ Inundated
_____ No Recorded Data Available	_____ Saturated in upper 12 inches
	_____ Water Marks
Field Observations:	_____ Drift Lines
	_____ Sediment Deposits
Depth of Surface Water: 0 (inches)	_____ Drainage Patterns in Wetlands
Depth to Free Water in Pit: >16 (inches)	Secondary Indicators:
Depth to Saturated Soil: >16 (inches)	_____ Oxidized Root Channels in Upper 12 Inches
	_____ Water Stained Leaves
	_____ Local Soil Survey Data
	_____ FAC-Neutral Test
	_____ Others (Explain in Remarks)

Remarks:

Project/Site: 070-508 / Opus Litton Lane Property, Hebron, KY
Site/Area ID: TP-4

SOILS

Map Unit Name:
(Series and Phase): Rossmoyne silt loam, 6 to 12% slopes (RsC)
(Taxonomy Subgroup): Aquic Fraguidalfs
Drainage Class: moderately well drained
Field Observations Confirm Mapped Type?
Yes X No

Profile Description:

Depth (inches):	Horizon:	Matrix Color (Munsell Moist):	Mottle Colors (Munsell Moist):	Mottle (Abundance/Size):	Texture, Concretions, Structure:
0-4	A	10YR 4/3	NA	NA	silty loam
4-16	B	10YR 5/4	10YR 5/6 and 10YR 6/1	medium, coarse	clay loam

Hydric Soil Indicators:

	Histosol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer in Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soil
	Aquic Moisture Regimes		Listed on Local Hydric Soils List
	Reducing Conditions		Listed on National Hydric Soils List
	Gleyed or Low Chroma Colors		Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes		No	X
Wetland Hydrology Present?	Yes		No	X
Hydric Soils Present?	Yes		No	X

Is this Sampling Point Within a Wetland?
Yes
No X

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetland Delineation Manual)

Project/Site:	070-508 Litton Lane Property, Hebron, KY			**Date:**	March 4, 2008
Applicant/Owner:	Opus North Corporation			**County:**	Boone
Investigator(s):	Matt Lauffer, Lindsey Hesch			**State:**	KY
Do normal circumstances exist on the site?		Yes X	No	**Community ID:**	
Is the site significantly disturbed (Atypical?)		Yes	No X	PFO	
Is the area a potential problem area?		Yes	No X	**Plot ID:**	TP-5
(if needed, explain on reverse.)				wetland 1 in	

VEGETATION

Dominant Plant Species:	Stratum:	Indicator:	Dominant Plant Species:	Stratum:	Indicator:
1. *Planatus occidentalis*	Tree	FACW-	10.		
2. *Acer rubrum*	Tree	FAC	11.		
3. *Acer negundo*	Tree	FAC+	12.		
4.			13.		
5.			14.		
6.			15.		
7.			16.		
8.			17.		
9.			18.		

Percent of dominant species that are OBL, FACW or FAC (and excluding FAC-) = 100%

Remarks:

Non-dominants: *Rosa multiflora, Fraxinus pennsylvanica, Ulmus rubra.* No herbaceous species present

HYDROLOGY

_____ Recorded Data (Describe in Remarks)
_____ Stream, Lake, or Tide Gauge
__X__ Aerial Photographs
_____ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 (inches)

Depth to Free Water in Pit: surface (inches)

Depth to Saturated Soil: surface (inches)

Wetland Hydrology Indicators:
Primary Indicators:
_____ Inundated
__x__ Saturated in upper 12 inches
_____ Water Marks
_____ Drift Lines
_____ Sediment Deposits
__x__ Drainage Patterns in Wetlands

Secondary Indicators:
_____ Oxidized Root Channels in Upper 12 Inches
_____ Water Stained Leaves
_____ Local Soil Survey Data
__X__ FAC-Neutral Test
_____ Others (Explain in Remarks)

Remarks:

Floodplain of an ephemeral stream. This area of the stream has a bank depth of less than 6 inches. Non-wetland areas of the floodplain are adjacent to entrenched portions of the stream with bank depths ranging from 1 to 4 feet.

Project/Site: 070-508 / Opus Litton Lane Property, Hebron, KY
Site/Area ID: TP-5

SOILS

Map Unit Name:
(Series and Phase): Jessup silt loam, 12 to 20 % slopes (JeD)
(Taxonomy Subgroup): Typic Hapludalfs
Drainage Class: well drained
Field Observations Confirm Mapped Type?
Yes _____ No _____

Profile Description:

Depth (inches):	Horizon:	Matrix Color (Munsell Moist):	Mottle Colors (Munsell Moist):	Mottle (Abundance/Size):	Texture, Concretions, Structure:
0-16+	A	2.5Y 4/2	5YR 4/4	few / fine	silty clay

Hydric Soil Indicators:

_____	Histosol	_____	Concretions
_____	Histic Epipedon	_____	High Organic Content in Surface Layer in Sandy Soils
_____	Sulfidic Odor	_____	Organic Streaking in Sandy Soil
_____	Aquic Moisture Regimes	_____	Listed on Local Hydric Soils List
_____	Reducing Conditions	_____	Listed on National Hydric Soils List
X	Gleyed or Low Chroma Colors	_____	Other (Explain in Remarks)

Remarks:

Chroma of two with mottles = hydric soil

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes X	No _____	Is this Sampling Point Within a Wetland?	
Wetland Hydrology Present?	Yes X	No _____	Yes X	
Hydric Soils Present?	Yes X	No _____	No _____	

Remarks:

Wetland 1 point in

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetland Delineation Manual)

Project/Site:	070-508 Litton Lane Property, Hebron, KY		**Date:** March 4, 2008
Applicant/Owner:	Opus North Corporation		**County:** Boone
Investigator(s):	Matt Lauffer, Lindsey Hesch		**State:** KY
Do normal circumstances exist on the site?	Yes X	No	**Community ID:**
Is the site significantly disturbed (Atypical?)	Yes	No X	forest floodplain
Is the area a potential problem area?	Yes	No X	**Plot ID:** TP-6
(if needed, explain on reverse.)			

VEGETATION

Dominant Plant Species:	Stratum:	Indicator:	Dominant Plant Species:	Stratum:	Indicator:
1. *Acer rubrum*	Tree	FAC	10.		
2. *Fraxinus americana*	Tree	FACU	11.		
3. *Lonicera maackii*	Shrub	UPL	12.		
4.			13.		
5.			14.		
6.			15.		
7.			16.		
8.			17.		
9.			18.		

Percent of dominant species that are OBL, FACW or FAC (and excluding FAC-) = 33%

Remarks:

No herbaceous species present

HYDROLOGY

_____ Recorded Data (Describe in Remarks)
_____ Stream, Lake, or Tide Gauge
__X__ Aerial Photographs
_____ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 (inches)

Depth to Free Water in Pit: >16 (inches)

Depth to Saturated Soil: >16 (inches)

Wetland Hydrology Indicators:
Primary Indicators:
_____ Inundated
_____ Saturated in upper 12 inches
_____ Water Marks
_____ Drift Lines
_____ Sediment Deposits
_____ Drainage Patterns in Wetlands

Secondary Indicators:
_____ Oxidized Root Channels in Upper 12 Inches
_____ Water Stained Leaves
_____ Local Soil Survey Data
_____ FAC-Neutral Test
_____ Others (Explain in Remarks)

Remarks:

Project/Site: 070-508 / Opus Litton Lane Property, Hebron, KY
Site/Area ID: TP-6

SOILS

Map Unit Name:
(Series and Phase): Jessup silt loam, 12 to 20 % slopes (JeD)
(Taxonomy Subgroup): Typic Hapludalfs
Drainage Class: well drained
Field Observations Confirm Mapped Type?
Yes _____ No _____

Profile Description:

Depth (inches):	Horizon:	Matrix Color (Munsell Moist):	Mottle Colors (Munsell Moist):	Mottle (Abundance/Size):	Texture, Concretions, Structure:
0-16+	A	10YR 4/2	10YR 4/6	few, medium	silt loam

Hydric Soil Indicators:

_____	Histosol	_____	Concretions
_____	Histic Epipedon	_____	High Organic Content in Surface Layer in Sandy Soils
_____	Sulfidic Odor	_____	Organic Streaking in Sandy Soil
_____	Aquic Moisture Regimes	_____	Listed on Local Hydric Soils List
_____	Reducing Conditions	_____	Listed on National Hydric Soils List
x	Gleyed or Low Chroma Colors	_____	Other (Explain in Remarks)

Remarks:

Chroma 2 soil with mottles is hydric soil

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes _____	No	X	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?	Yes _____	No	X	Yes _____
Hydric Soils Present?	Yes X	No	_____	No X

Remarks:

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Project/Site:	070-508 Litton Lane Property, Hebron, KY	**Date:**	March 4, 2008
Applicant/Owner:	Opus North Corporation	**County:**	Boone
Investigator(s):	Matt Lauffer, Lindsey Hesch	**State:**	KY

Do normal circumstances exist on the site?	Yes X	No	**Community ID:**
Is the site significantly disturbed (Atypical?)	Yes	No X	Mesic forest
Is the area a potential problem area?	Yes	No X	**Plot ID:** TP-7
(if needed, explain on reverse.)			

VEGETATION

Dominant Plant Species:	Stratum:	Indicator:	Dominant Plant Species:	Stratum:	Indicator:
1. *Lonicera maackii*	Shrub	UPL	10.		
2. *Fraxinus americana*	Tree	FACU	11.		
3. *Acer rubrum*	Tree	FAC	12.		
4. *Alliaria petiolata*	Herb	FACU-	13.		
5.			14.		
6.			15.		
7.			16.		
8.			17.		
9.			18.		

Percent of dominant species that are OBL, FACW or FAC (and excluding FAC-) = 25%

Remarks:

HYDROLOGY

_____ Recorded Data (Describe in Remarks)
_____ Stream, Lake, or Tide Gauge
__X__ Aerial Photographs
_____ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 (inches)

Depth to Free Water in Pit: >16 (inches)

Depth to Saturated Soil: >16 (inches)

Wetland Hydrology Indicators:
Primary Indicators:
_____ Inundated
_____ Saturated in upper 12 inches
_____ Water Marks
_____ Drift Lines
_____ Sediment Deposits
_____ Drainage Patterns in Wetlands

Secondary Indicators:
_____ Oxidized Root Channels in Upper 12 Inches
_____ Water Stained Leaves
_____ Local Soil Survey Data
_____ FAC-Neutral Test
_____ Others (Explain in Remarks)

Remarks:

Project/Site: 070-508 / Opus Litton Lane Property, Hebron, KY
Site/Area ID: TP-7

SOILS

Map Unit Name:
(Series and Phase): Rossmoyne silt loam, 0 to 6% slopes (RsB)
(Taxonomy Subgroup): Aquic Fraguidalfs
Drainage Class: moderately well drained
Field Observations Confirm Mapped Type?
Yes X No

Profile Description:

Depth (inches):	Horizon:	Matrix Color (Munsell Moist):	Mottle Colors (Munsell Moist):	Mottle (Abundance/Size):	Texture, Concretions, Structure:
0-8	A	10YR 4/3	NA	NA	silt loam
8-16	B	10YR 5/3	10YR 5/6	fine / many	silt loam

Hydric Soil Indicators:

	Histosol		Concretions
	Histic Epipedon		High Organic Content in Surface Layer in Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soil
	Aquic Moisture Regimes		Listed on Local Hydric Soils List
	Reducing Conditions		Listed on National Hydric Soils List
	Gleyed or Low Chroma Colors		Other (Explain in Remarks)

Remarks:

Chroma of 3 with mottles = not hydric

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes		No	X
Wetland Hydrology Present?	Yes		No	X
Hydric Soils Present?	Yes		No	X

Is this Sampling Point Within a Wetland?
Yes
No X

Remarks:

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Project/Site:	070-508 Litton Lane Property, Hebron, KY		**Date:** March 4, 2008
Applicant/Owner:	Opus North Corporation		**County:** Boone
Investigator(s):	Matt Lauffer, Lindsey Hesch		**State:** KY
Do normal circumstances exist on the site?	Yes X	No	**Community ID:**
Is the site significantly disturbed (Atypical?)	Yes	No X	PEM
Is the area a potential problem area?	Yes	No X	**Plot ID:** TP-8
(if needed, explain on reverse.)			Wetland 2 Point In

VEGETATION

Dominant Plant Species:	Stratum:	Indicator:	Dominant Plant Species:	Stratum:	Indicator:
1. *Leersia oryzoides*	Herb	OBL	10.		
2. *Eupatorium perfoliatum*	Herb	FACW+	11.		
3. *Lysimachia nummularia*	Herb	OBL	12.		
4. *Scirpus atrovirens*	Herb	OBL	13.		
5. *Rosa multiflora*	Shrub	FACU	14.		
6.			15.		
7.			16.		
8.			17.		
9.			18.		

Percent of dominant species that are OBL, FACW or FAC (and excluding FAC-) = 80%

Remarks:

HYDROLOGY

_____ Recorded Data (Describe in Remarks)
_____ Stream, Lake, or Tide Gauge
X Aerial Photographs
_____ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 (inches)

Depth to Free Water in Pit: 0 (inches)

Depth to Saturated Soil: 0 (inches)

Wetland Hydrology Indicators:
Primary Indicators:
_____ Inundated
x Saturated in upper 12 inches
_____ Water Marks
_____ Drift Lines
_____ Sediment Deposits
x Drainage Patterns in Wetlands

Secondary Indicators:
_____ Oxidized Root Channels in Upper 12 Inches
x Water Stained Leaves
_____ Local Soil Survey Data
_____ FAC-Neutral Test
_____ Others (Explain in Remarks)

Remarks:

Project/Site: 070-508 / Opus Litton Lane Property, Hebron, KY
Site/Area ID: TP-8

SOILS

Map Unit Name:
(Series and Phase): Jessup silt loam, 12 to 20 % slopes (JeD)
(Taxonomy Subgroup): Typic Hapludalfs
Drainage Class: well drained
Field Observations Confirm Mapped Type?
Yes _____ No _____

Profile Description:

Depth (inches):	Horizon:	Matrix Color (Munsell Moist):	Mottle Colors (Munsell Moist):	Mottle (Abundance/Size):	Texture, Concretions, Structure:
0-16	A	10YR 4/2	10YR 6/6	medium / many	silt loam

Hydric Soil Indicators:

_____	Histosol	_____	Concretions
_____	Histic Epipedon	_____	High Organic Content in Surface Layer in Sandy Soils
_____	Sulfidic Odor	_____	Organic Streaking in Sandy Soil
_____	Aquic Moisture Regimes	_____	Listed on Local Hydric Soils List
_____	Reducing Conditions	_____	Listed on National Hydric Soils List
x	Gleyed or Low Chroma Colors	_____	Other (Explain in Remarks)

Remarks:

Chroma 2 with mottles = hydric soil

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes X	No _____	Is this Sampling Point Within a Wetland?	
Wetland Hydrology Present?	Yes X	No _____	Yes X	
Hydric Soils Present?	Yes X	No _____	No _____	

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetland Delineation Manual)

Project/Site:	070-508 Litton Lane Property, Hebron, KY		**Date:** March 4, 2008
Applicant/Owner:	Opus North Corporation		**County:** Boone
Investigator(s):	Matt Lauffer, Lindsey Hesch		**State:** KY
Do normal circumstances exist on the site?	Yes X	No	**Community ID:** forest
Is the site significantly disturbed (Atypical?)	Yes	No X	
Is the area a potential problem area? (if needed, explain on reverse.)	Yes	No X	**Plot ID:** TP-9 Wetland 2 Point Out

VEGETATION

Dominant Plant Species:	Stratum:	Indicator:	Dominant Plant Species:	Stratum:	Indicator:
1. *Lonicera japonica*	Woody Vine	FAC-	10.		
2. *Rubus allegheniensis*	Shrub	FACU	11.		
3. *Celtis occidentalis*	Tree	FACU	12.		
4. *Acer saccharum*	Tree	FACU-	13.		
5. *Poa* sp.	Herb	NI	14.		
6.			15.		
7.			16.		
8.			17.		
9.			18.		

Percent of dominant species that are OBL, FACW or FAC (and excluding FAC-) = 0%

Remarks:

HYDROLOGY

_____ Recorded Data (Describe in Remarks)
_____ Stream, Lake, or Tide Gauge
__X__ Aerial Photographs
_____ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 (inches)

Depth to Free Water in Pit: >16 (inches)

Depth to Saturated Soil: >16 (inches)

Wetland Hydrology Indicators:

Primary Indicators:
_____ Inundated
_____ Saturated in upper 12 inches
_____ Water Marks
_____ Drift Lines
_____ Sediment Deposits
_____ Drainage Patterns in Wetlands

Secondary Indicators:
_____ Oxidized Root Channels in Upper 12 Inches
_____ Water Stained Leaves
_____ Local Soil Survey Data
_____ FAC-Neutral Test
_____ Others (Explain in Remarks)

Remarks:

Project/Site: 070-508 / Opus Litton Lane Property, Hebron, KY
Site/Area ID: TP-9

SOILS

Map Unit Name:
(Series and Phase): Jessup silt loam, 12 to 20% slopes (JeE Drainage Class: well drained
(Taxonomy Subgroup) Aquic Fraguidalfs Field Observations Confirm Mapped Type?
Yes X No

Profile Description:

Depth (inches):	Horizon:	Matrix Color (Munsell Moist):	Mottle Colors (Munsell Moist):	Mottle (Abundance/Size):	Texture, Concretions, Structure:
0-3	A	10YR5/3	NA	NA	silty loam
3-16	B	10YR5/3	10YR5/6	medium/many	silty clay

Hydric Soil Indicators:

	Histosol		Concretions
	Histic Epipedon		High Organic Content in (Upper) Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soil
	Aquic Moisture Regimes		Listed on Local Hydric Soils List
	Reducing Conditions		Listed on National Hydric Soils List
	Gleyed or Low Chroma Colors		Other (Explain in Remarks)

Remarks:

Chroma 3 with mottles is not hydric

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	No	X	Is this Sampling Point Within a
Wetland Hydrology Present?	Yes	No	X	Yes
Hydric Soils Present?	Yes	No	X	No X

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetland Delineation Manual)

Project/Site:	070-508 Litton Lane Property, Hebron, KY		**Date:** March 4, 2008
Applicant/Owner:	Opus North Corporation		**County:** Boone
Investigator(s):	Matt Lauffer, Lindsey Hesch		**State:** KY
Do normal circumstances exist on the site?	Yes **X**	No ____	**Community ID:**
Is the site significantly disturbed (Atypical?	Yes ____	No **X**	forest
Is the area a potential problem area? (if needed, explain on reverse.)	Yes ____	No **X**	**Plot ID:** TP-10

VEGETATION

Dominant Plant Species:	Stratum:	Indicator:	Dominant Plant Specie	Stratum:	Indicator:
1. *Fraxinus americana*	Tree	FACU	10.		
2.			11.		
3.			12.		
4.			13.		
5.			14.		
6.			15.		
7.			16.		
8.			17.		
9.			18.		

Percent of dominant species that are OBL, FACW or FAC (and excluding FAC-) = 0%

Remarks:

Monoculture of *Fraxinus americana*. No herbaceous species present

HYDROLOGY

____ Recorded Data (Describe in Remarks)
____ Stream, Lake, or Tide Gauge
__X__ Aerial Photographs
____ No Recorded Data Available

Field Observations:

Depth of Surface Water: __0__ (inches)

Depth to Free Water in Pit: __>16__ (inches)

Depth to Saturated Soil: __>16__ (inches)

Wetland Hydrology Indicators:

Primary Indicators:
____ Inundated
____ Saturated in upper 12 inches
____ Water Marks
____ Drift Lines
____ Sediment Deposits
____ Drainage Patterns in Wetlands

Secondary Indicators:
____ Oxidized Root Channels in Upper 12 Inches
____ Water Stained Leaves
____ Local Soil Survey Data
____ FAC-Neutral Test
____ Others (Explain in Remarks)

Remarks:

Project/Site: 070-508 / Opus Litton Lane Property, Hebron, KY
Site/Area ID: TP-10

SOILS

Map Unit Name:
(Series and Phase): Rossmoyne silt loam, 6 to 12% slopes (Drainage Class: moderately well drained
(Taxonomy Subgroup) Aquic Fraguidalfs Field Observations Confirm Mapped Type?
Yes X No

Profile Description:

Depth (inches):	Horizon:	Matrix Color (Munsell Moist):	Mottle Colors (Munsell Moist):	Mottle (Abundance/Size):	Texture, Concretions, Structure:
0-16	A	2.5Y 5/3	10YR 6/6	many / medium	clay loam

Hydric Soil Indicators:

	Histosol		Concretions
	Histic Epipedon		High Organic Content in (Upper) Sandy Soils
	Sulfidic Odor		Organic Streaking in Sandy Soil
	Aquic Moisture Regimes		Listed on Local Hydric Soils List
	Reducing Conditions		Listed on National Hydric Soils List
	Gleyed or Low Chroma Colors		Other (Explain in Remarks)

Remarks:

Chroma 3 with mottles is not hydric

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes X	No		Is this Sampling Point Within a
Wetland Hydrology Present?	Yes	No	X	Yes
Hydric Soils Present?	Yes	No	X	No X

Remarks:

APPENDIX II

SITE PHOTOGRAPHS

Photo #1: View of Wetland 1 on the floodplain of Stream 3. Photo taken facing east.

Photo #2: View of Wetland 1 on the floodplain of Stream 3. Photo taken facing north.

Photo #3: View of Wetland 2 and adjacent pond. Photo taken facing southwest.

Photo #4: View of Wetland 2. The Interstate 275 embankment can be seen in the background. Photo taken facing northeast.

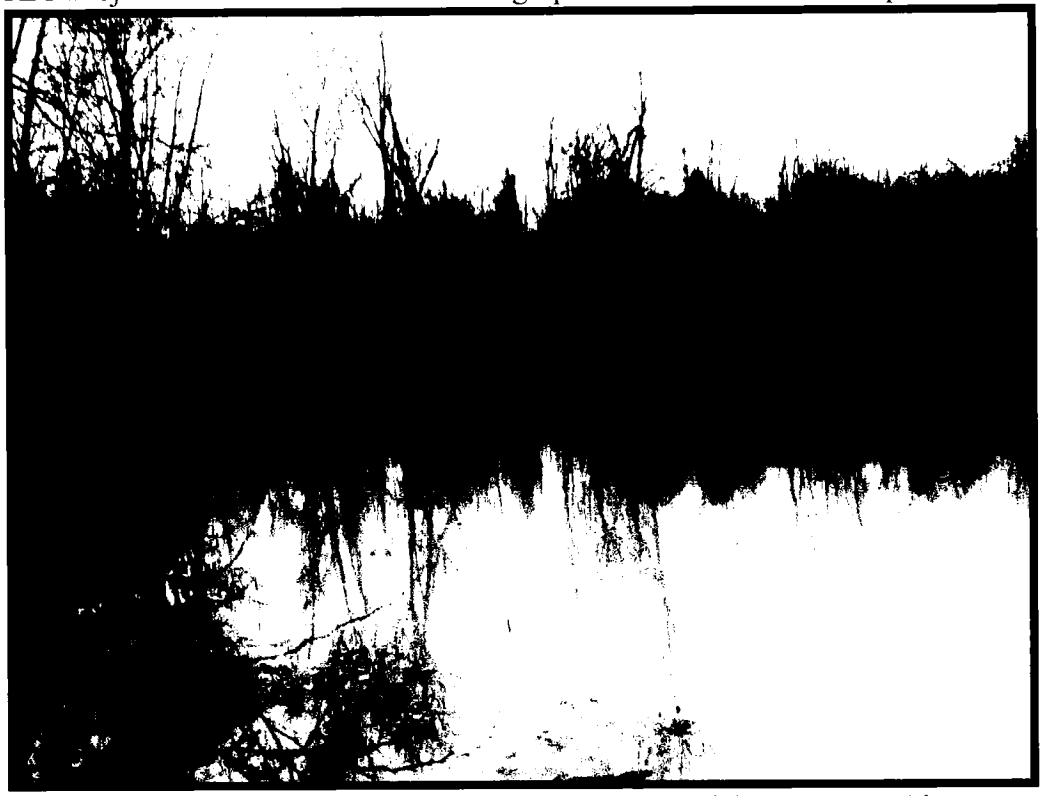


Photo #5: View of the pond in the northwest portion of the Property. Photo taken facing southeast.

Photo #6: View of a portion of the pond in the northwest portion of the property. Photo taken facing south.

Photo #7: View of Stream 1 facing downstream. Photo taken facing north.

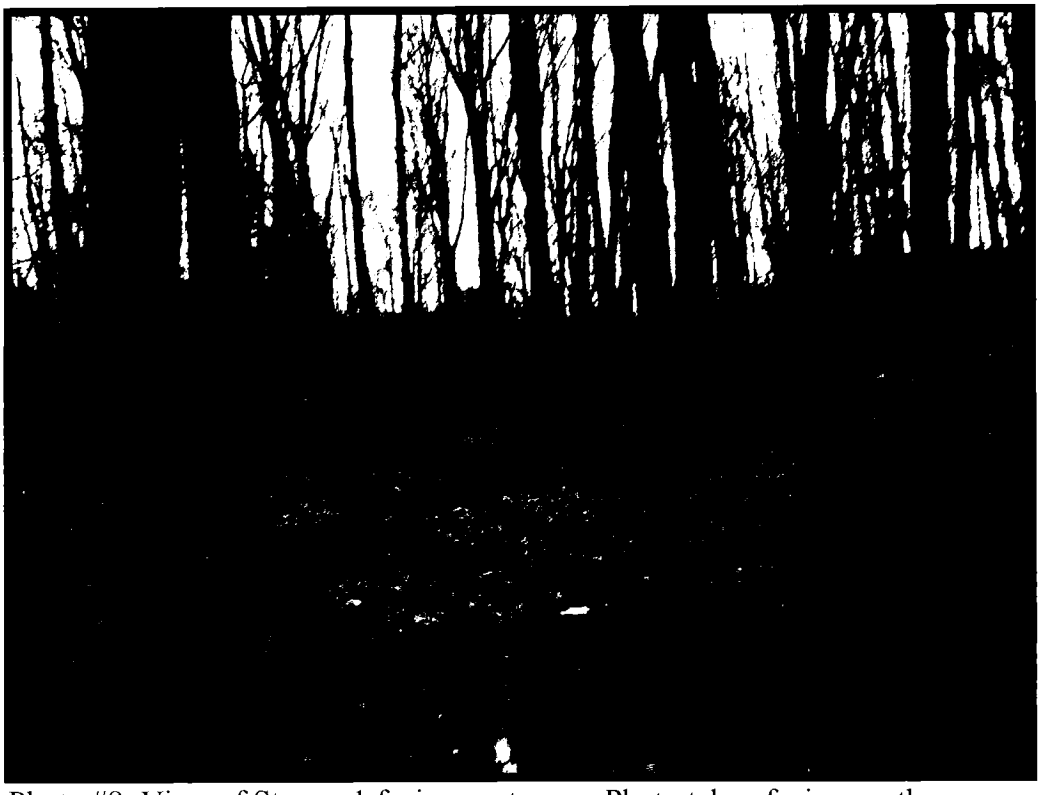


Photo #8: View of Stream 1 facing upstream. Photo taken facing south.

Photo #9: View of Stream 2 at the confluence with of Stream 1. Photo taken facing northwest.

Photo #10: View of the headwaters of Stream 2. Photo taken facing northwest.

Photo #11: View of Stream 2B facing upstream. Photo taken facing southeast.

Photo #12: View of the ephemeral portion of Stream 3 facing upstream. Photo taken facing east.

Photo #13: View of intermittent portion of Stream 3, downstream of Wetland 1, facing downstream. Photo taken facing west.

Photo #14: View of Stream 3 at the confluence with Stream 4. Photo taken facing southeast.

Photo #15: View of Stream 3 exiting the Property. Photo taken facing northwest.

Photo #16: View of Stream 4 facing upstream. Photo taken facing south.

Photo #17: View of the ephemeral portion of Stream 5 facing upstream. Photo taken facing northeast.

Photo #18: View of the intermittent portion of Stream 5 facing upstream. Photo taken facing east.

Photo #19: View of Stream 6. Photo taken facing northeast.

Photo #20: View of Stream 6. Photo taken facing southwest.

Photo #21: View of Stream 7. Photo taken facing northeast.

Photo #22: View of Stream 7. Photo taken facing southwest.

Photo #23: View of the headwaters of Stream 7. The Interstate 275 embankment can be seen in the background. Photo taken facing northeast.

Photo #24: View of Stream 8. Photo taken facing southwest.

Photo #25: View of *Rubus allegheniensis* and *Lonicera maackii* with a *Robinia pseudoacacia* overstory near Wetland Determination Test Pit #1. Photo taken facing west.

Photo #26: View of old field habitat at Wetland Determination Test Pit #2. Photo taken facing east.

Photo #27: View of the forested floodplain at Wetland Determination Test Pit #3. Photo taken facing northwest.

Photo #28: View of the forest at Wetland Determination Test Pit #4. Photo taken facing north.

Photo #29: View of the forested floodplain at Wetland Determination Test Pit #6. Photo taken facing west.

Photo #30: View of forest with a *Lonicera maackii* understory at Wetland Determination Test Pit #7. Photo taken facing east.

Photo #31: View of the forest at Wetland Determination Test Pit #10. Photo taken facing east.

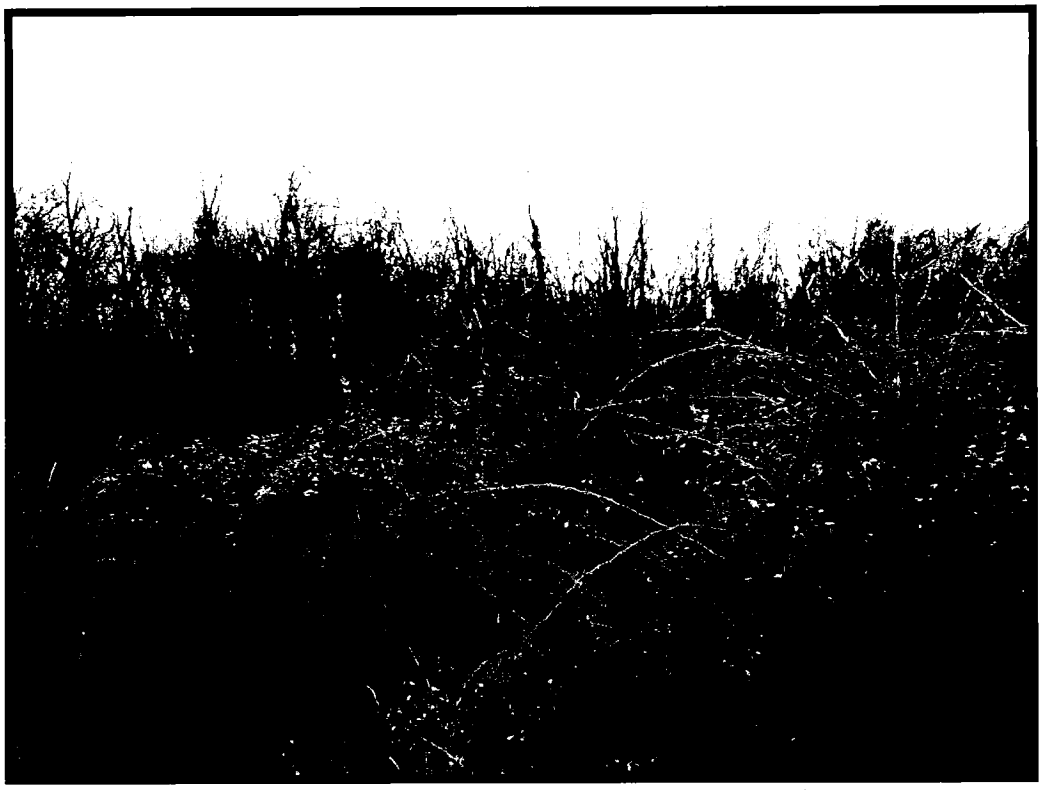


Photo #32: View of old field habitat in the southern portion of the Property. Photo taken facing north.

Photo #33: View of old field habitat in the southern portion of the Property. Photo taken facing northeast.

Photo #34: View of old field habitat in the southern end of the Property. Photo taken facing south.

Photo #35: View of old field habitat southeast of the pond. Photo taken facing southwest.

Photo #36: View of old field habitat located between Stream 3 and the pond. Photo taken facing south.

Photo #37: View of early successional forest located between Stream 3 and the pond. Photo taken facing west.

Photo #38: View of early successional forest located near Stream 6. Photo taken facing south.

Photo #39: View of forest with an understory of *Lonicera maackii* located east of Stream 7. Photo taken facing east.

Photo #40: View of Stream 9 in the eastern portion of the Property. Photo taken facing north.

ATTACHMENT C

AGENCY CLEARANCE DOCUMENTATION

RECEIVED
FEB 05 2009

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Kentucky Ecological Services Field Office
330 West Broadway, Suite 265
Frankfort, Kentucky 40601
(502) 695-0468

February 3, 2009

Mr. Daniel Godee
Civil & Environmental Consultants
4274 Glendale Milford Road
Cincinnati, OH 45242

Subject: FWS #2008-B-0477; Hebron Industrial Development Site, Indiana Bat Hibernacula and Running Buffalo Clover Survey Results; Boone County, Kentucky.

Dear Mr. Goode:

Thank you for your correspondence dated January 14, 2009 providing the results of the running buffalo clover (*Trifolium stoloniferum*) survey and additional information regarding potential Indiana bat (*Myotis sodalis*) habitat on the proposed project site. This information was provided in response to our comments dated May 5, 2008. Fish and Wildlife personnel have reviewed the submitted information and offer the following comments:

Indiana bat

The proposed project will not impact any known or potential hibernacula and any removal of trees will only occur between October 15 and March 31. As such, the Service concurs that the proposed project is not likely to adversely affect the federally endangered Indiana bat.

Running Buffalo Clover

A survey for running buffalo clover was conducted on June 25 and 26, 2008 using transects spaced 15 to 25 feet apart. All species of clover and those with clover-like leaves were closely inspected when encountered. The Service has reviewed the submitted survey report and finds the report acceptable. Based on the negative survey results, the Service concurs that the proposed project is not likely to adversely affect the federally endangered running buffalo clover.

In view of this information and our concurrence with the determinations, we believe that the requirements of section 7 have been fulfilled. Please note that obligations under Section 7 of the Act must be reconsidered if (1) new information reveals impacts of the proposed action that may affect listed species or critical habitat in a manner not previously considered, (2) the proposed action is subsequently modified to include activities which were not considered during this

consultation, or (3) new species are listed or critical habitat designated that might be affected by the proposed action.

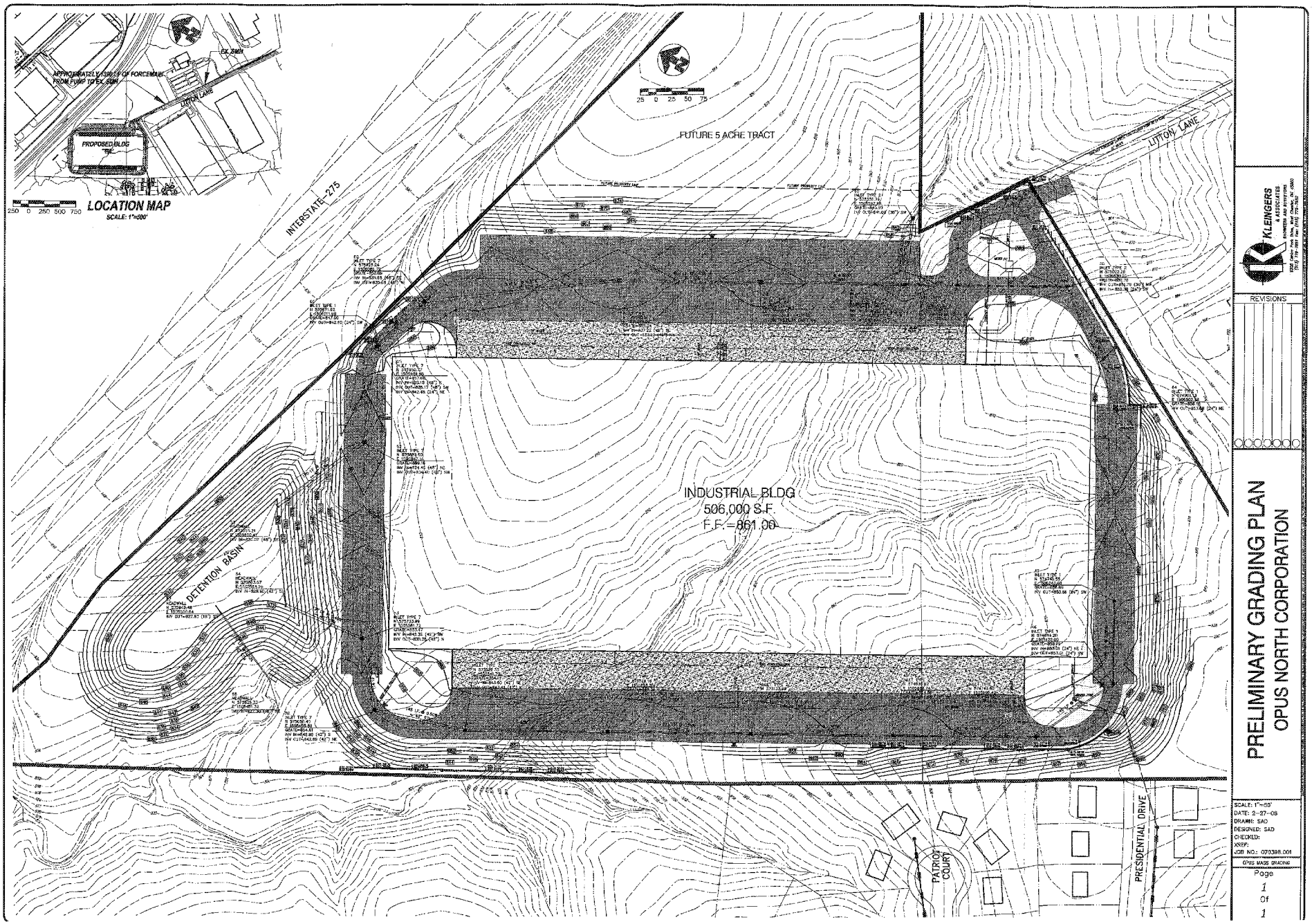
We appreciate the opportunity to review the subject report. Please contact Jennifer Garland at 502-695-0468 (ext. 115) if you have questions regarding these comments.

Sincerely,

Virgil Lee Andrews, Jr.
Field Supervisor

ATTACHMENT D

PRELIMINARY GRADING PLAN



KLEINGERS & ASSOCIATES
ENGINEERS AND SURVEYORS

REVISIONS

PRELIMINARY GRADING PLAN
OPUS NORTH CORPORATION

SCALE: 1"=50'
DATE: 2-27-08
DRAWN: SAD
DESIGNED: SAD
CHECKED:
XREF:
JOB NO.: 070398.001
OPUS MASS GRADING